Government of
Saskatchewan

Annual Report
1987-88

Saskatchewan Environment and Public Safety

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Letters of Transmittal

Her Honour
The Honourable Sylvia O. Fedoruk
Lieutenant Governor of Saskatchewan
Government House
4607 Dewdney Avenue
Regina, Saskatchewan
S4P 3V7

Dear Madam:

I have the honour to submit herewith the annual report of Saskatchewan Environment and Public Safety for the period commencing April 1, 1987 and ending March 31, 1988.

Respectfully submitted,

H.J. Swan

The Honourable H.J. Swan
Minister of Environment and Public Safety

Dear Sir:

It is my pleasure to present you the Annual Report of Saskatchewan Environment and Public Safety for the fiscal year ending March 31, 1988. This report provides a comprehensive review of all aspects of department activities for that period.

This was a most challenging year for the department. The quest for increasing economic development and diversification places many new and additional demands on the environment and on the ability of the Department to respond to the many challenges of improving the quality of life and maintaining adequate safety standards and emergency response capabilities.

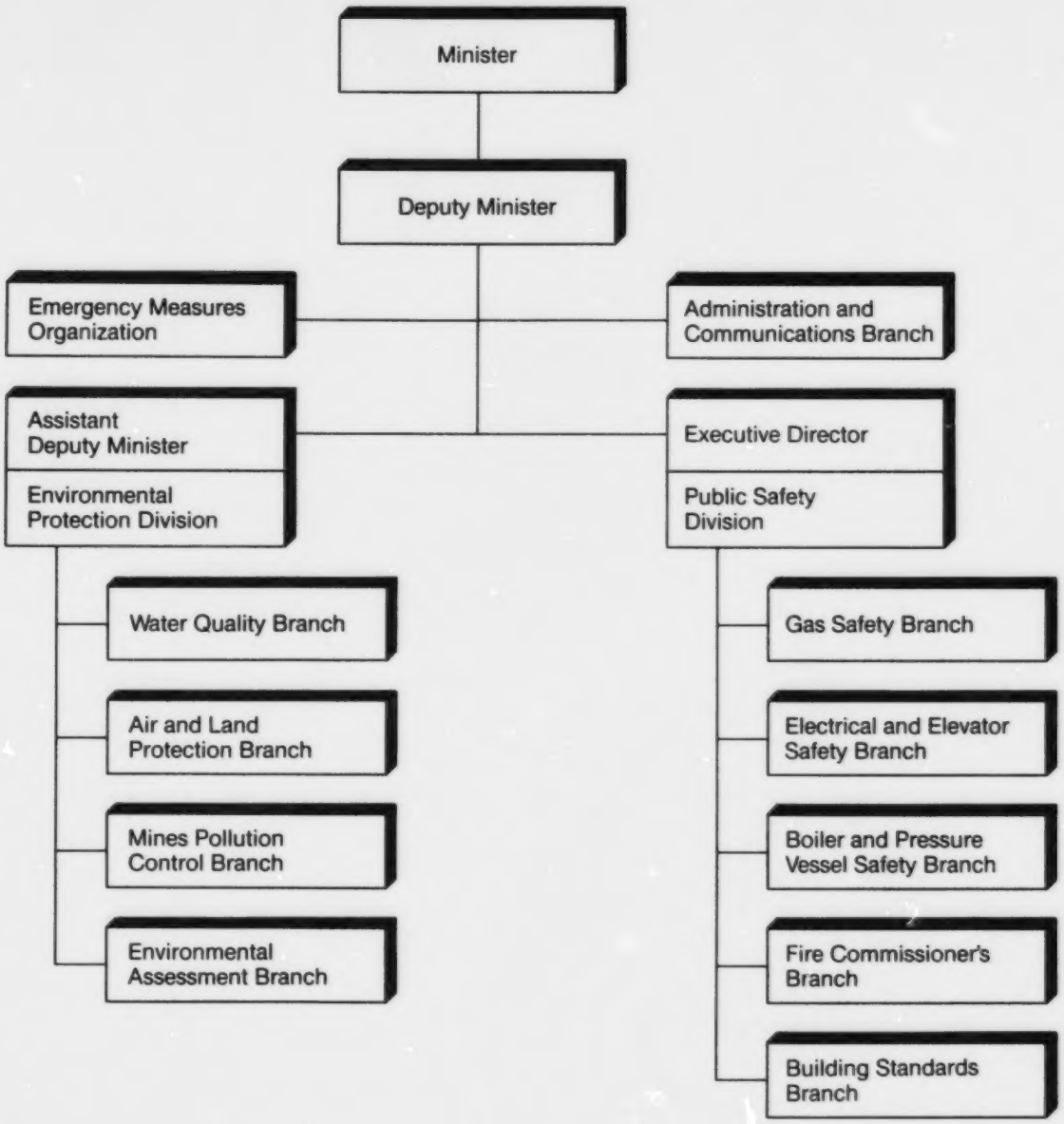
I would like to take this opportunity to compliment all department staff for their dedication and efforts during the past year and also acknowledge the co-operation of federal, municipal and other provincial government departments.

Respectfully submitted,

Peter S. van Es
Deputy Minister

Organization Chart

Saskatchewan Environment and Public Safety



Department Mandate

The mandate of Saskatchewan Environment and Public Safety is threefold:

Environmental Protection

- To protect and enhance the environment in a manner that promotes the physical, economic and social well-being of the people of Saskatchewan today and in the future.

Public Safety

- To provide and maintain safety standards for industry and the general public in the fields of boiler and pressure vessel, gas, electrical and elevator installations; amusement rides; fire safety; and building standards and accessibility.

Emergency Measures

- To develop and maintain an effective emergency response capability at the provincial and municipal levels of government to ensure the survival and recovery of our citizens and communities from any peacetime emergency or disaster.

Legislation

The following Acts were administered by Saskatchewan Environment and Public Safety in the 1987-88 fiscal year.

The Environmental Management and Protection Act
The Department of the Environment Act, 1984
The Air Pollution Control Act
The Litter Control Act
The Scrap Vehicles Act
The Environmental Assessment Act
The Ecological Reserves Act
The Water Appeal Board Act
The Boiler and Pressure Vessel Act
The Gas Inspection and Licensing Act
The Electrical Inspection and Licensing Act, 1981
The Passenger and Freight Elevator Act
The Amusement Ride Safety Act
The Fire Prevention Act, 1980
The Uniform Building and Accessibility Standards Act
The Civil Defence Act

Environmental Protection Division

R. R. Sentis
Assistant Deputy Minister

Mission

To protect and enhance the environment in a manner that promotes the physical, economic and social well-being of the people of Saskatchewan today and in the future.

Activities

Environmental protection activities are concentrated in four branches reporting directly to the Assistant Deputy Minister:

- Air and Land Protection
- Water Quality
- Mines Pollution Control, and
- Environmental Assessment

Air and Land Protection Branch

L.J. Lechner
Director

Objectives

- To minimize air pollution from industrial and other sources.
- To preserve and enhance the environment by managing land use activities.
- To ensure that high quality natural, agricultural and recreational lands are not irreversibly allocated or impacted by incompatible uses.

Activities

- Issue approvals to operate in accordance with The Air Pollution Control Act for industrial sources, fuel-burning equipment and incinerators.
- Regularly monitor air quality in Regina and Saskatoon. Investigate air quality complaints and encourage industry to reduce emissions of air pollutants to the lowest practical levels.
- Safeguard the physical and living environment in the event of storage or spill of hazardous substances.
- Provide advice on risks to public safety and property in the event of a deliberate or accidental discharge of hazardous substance into the environment.
- Assess degree of contamination of lands as a result of accidental or intentional release of chemicals.
- Encourage waste reduction, recycling, reuse and recovery.
- Regulate environmentally acceptable storage, treatment and disposal of waste to land.
- Identify degradation pathways and potential impacts on the environment as a result of the use of toxic chemicals.
- Promote rehabilitation of polluted or disturbed lands.
- Management of programs to recycle auto bodies and pesticide containers.
- Identify and protect environmentally sensitive or hazardous lands.
- Recommend development of only those lands that are free from hazards such as flooding, erosion, subsidence and poor drainage.

Air Quality Section

Legislation

The Clean Air Act was passed by the Legislature in November, 1987. The new Act will require all significant industrial and other sources of air pollution to obtain a permit to operate. A control order system will be used to deal with any problem situations that may be encountered. The Clean Air Regulations had been drafted at year end and the Act as well as the Regulations are expected to come into force during the next fiscal year.

Industrial Surveillance Activities

During the fiscal year, 40 new permits to operate under The Air Pollution Control Act were issued and 225 permits were renewed. Figure 1 illustrates the growth in the number of permits issued since 1975. Table 1 provides a breakdown of the industrial classifications of the permits handled during the year.

Figure 1

Industrial Permits Issued 1975-1987

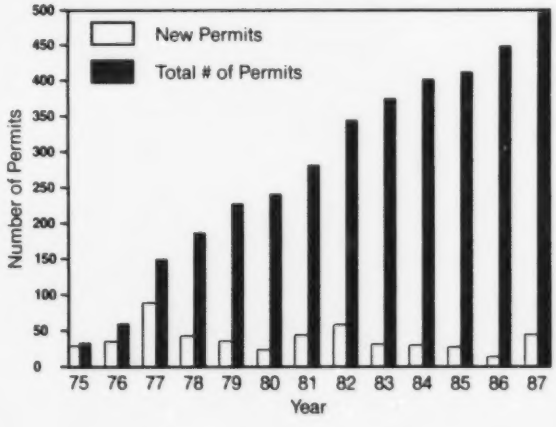


Table 1
Classification of Permits

	New	Renewals	Cancelled
Agricultural Chemical Formulating Plants	—	1	1
Anhydrous Ammonia Storage Facilities (Bulk)	—	3	—
Asphalt Plants	—	30	6
Bulk Blending Fertilizer Facilities	1	2	—
Chlorine Packaging Facility	—	1	—
Concrete Batching Plants	—	3	1
Crematoriums	—	1	—
Gas & Oil Gathering and Treating Facilities	7	18	1
Grain Elevators	24	142	—
Incinerators	1	6	—
Iron Foundries	1	—	1
Miscellaneous Industries	6	13	1
Oil Refineries	—	1	—
Seed Cleaning & Treating Facilities	—	3	—
Thermal Generating Facilities	—	1	—
Totals	**40**	**225**	**11**

Selected major industries are required to monitor emissions and/or ambient air quality near their operations, as a result of conditions attached to their permits to operate. The results of these monitoring efforts are submitted to the Section for review. For the most part, monitoring results are well within provincial standards and requirements.

Where violations occur, the Section works with industry to achieve a lowering of emissions or other resolution of the problem.

Section personnel conduct numerous formal inspections of industries which are under permit. During these inspections staff members verify that processes and equipment are operating in the intended/expected manner. Any complaints or problems are discussed and areas for improvement or changes are negotiated. In addition to formal inspections, branch personnel also visit numerous industries and other operations on a random, informal basis. The purpose of these visits is to ensure that appropriate follow-up measures are put in place in those situations where improvements were previously agreed upon.

Stack sampling at PCS

Urban Air Monitoring

At year end, the urban air monitoring network consisted primarily of two major stations located in the downtown commercial areas of Regina and Saskatoon. The purpose of the network is to monitor long-term trends in air pollution levels and determine the effectiveness of abatement measures.

The results obtained during 1987-88 were similar to those for previous years, although a full analysis of the data has not been completed. Reports summarizing results from the provincial air monitoring program are available from the Department on request.

In addition to the urban air monitoring program, the Section monitored air quality near the Poplar River Power Station. A number of industries were also required to carry out ambient air monitoring as conditions of approval.

Acid Rain

Saskatchewan Environment and Public Safety is a member of the Western Canada Long Range Transport of Atmospheric Pollutants Technical Committee. The committee plans and co-ordinates acid deposition research and monitoring programs for western Canada. An annual report outlining the acid rain activities in western Canada during 1987 is available from the Department on request.

Final maps of Saskatchewan depicting soils and geology sensitivity to acid precipitation were made available in March, 1987.

Saskatchewan Environment and Public Safety is participating with the other western provinces in a study to develop acid deposition criteria for western and northern Canada to protect highly sensitive ecosystems. It is apparent that the criteria of 20 kg/ha/yr of wet sulphate used in eastern Canada may not be appropriate for western and northern Canada. The relative importance of dry deposition and total acid loading criteria are of concern. This study is anticipated to be completed in the next fiscal year.

Complaint Investigation

Ninety-eight air pollution complaints were received by the Section during 1987-88. This represents an increase of approximately 20% from the previous fiscal year. In general, complaints centred on odours, smoke and dust from operations such as refineries, open burning and grain elevators. In a number of cases, small changes to operating procedures were or would be sufficient to satisfy the complaint. On the whole, Saskatchewan industries and citizens co-operated with Section requests to eliminate the causes of air pollution complaints. Of the complaints, 22 were resolved during the year, 18 were still under investigation at the end of the reporting period and 8 required further action by industry to correct the problem.

The Clean Air Act requires all industries and other sources of air pollution to obtain a permit to operate.

Waste Management Section

Spill Response and Control

Saskatchewan Environment and Public Safety is responsible for the enforcement of the Environmental Spill Control Regulations which are designed to safeguard the environment in the event of a spill. The regulations require that spills of pollutants be reported immediately to the Department's Spill Report Centre to ensure proper containment, clean up and disposal of contaminated material.

Spill Report Centre personnel are available 24 hours a day. When a spill is reported, they determine if adequate measures have been taken to clean up the spill and may also provide advice and/or instructions on further work required. The spill team is equipped to make on-site inspections, determine if appropriate actions are being taken and advise on disposal requirements.

During the year, the Spill Report Centre received approximately 1000 calls. Two hundred and nineteen of these calls were to report spills under the Environmental Spill Control Regulations. In addition, the Spill Response Team dealt with numerous complaints and requests for information concerning chemical handling, disposal of chemicals, transportation of dangerous goods and environmental manifests.

One-third of the reported spills required visits to the site to investigate, inspect and supervise remedial activities. Dozens of additional inspections were completed with the assistance of other provincial or municipal officials and emergency response organizations.

Table 2 summarizes the number of spills reported, the product and the total volume spilled.

Table 3 illustrates the cause of the spills correlated with number of occurrences and volumes of product spilled.

Mock spill incident

Table 2
Spill Statistics by Product, Number of Incidents and Quantity

Product Spilled	Number of Incidents	Quantity
Petroleum Products		
Asphalt	3	6.9m³
Crude Oil	2	82.7 m³
Diesel	36	223.5 m³
Heating Oil	1	3.0 m³
Gasoline	45	256.0 m³
Transformer Oil (< 5 ppm)	2	0.8 m³
Used Oil	2	1.6 m³
Other	16	238.4 m³
SUBTOTAL	107	812.9 m³
Non-Petroleum Products		
Acid	6	8.4 m³/670 kg
Fertilizer	13	39.2 m³/41,000 kg
Industrial Chemical	12	50.8 m³/16,200 kg
Industrial Waste	9	33.6 m³/57,915 kg
PCBs	36	7.5 m³
Pesticides	10	0.3 m³/275 kg
Radioactive	12	179.0 m³
Sewage	14	2,572.5 m³
SUBTOTAL	112	2,891.3 m³
TOTAL	219	3,704.2 m³/116,160 kg

Table 3
Spill Statistics by Cause, Number of Incidents and Quantity

Cause	Number of Incidents	Quantity
Transportation — truck, railway, etc.	42	334.6 m³/18,770 kg
Handling	32	101.5 m³/61,520 kg
Equipment Failure	57	458.6 m³/35,870 kg
Above Ground Tank, Overflows	33	429 m³
Below Ground Tank Leaks, Line Leaks	27	2,205.3 m³
Miscellaneous — lighting, vandalism, unknown	28	175.2 m³
TOTAL	219	3,704.2 m³/116,160 kg

Industrial and Hazardous Wastes

Hazardous wastes of various types are generated by many industries and businesses, government agencies and the general public of Saskatchewan. These wastes require special controls when they are handled, stored, transported, treated and disposed of into the environment.

The Department is responsible for ensuring that these wastes are managed in a proper manner and in this regard it monitors environmental conditions at hazardous wastes sites, carries out inspections and assessments of industrial facilities, provides instruction regarding the transportation requirements for hazardous wastes, provides technical advice on waste management problems, and issues Minister's Orders for the operation of industrial facilities, the control of pollutants, and the clean up and reclamation of industrial sites.

The Branch provided advice to generators of hazardous wastes on the available methods of disposal for such wastes. These included the recycling of wastes, treatment and disposal of wastes at a disposal facility within the province, or disposal at an out of province hazardous waste facility. Since the cost of disposal at hazardous waste facilities is very high, strong efforts to recycle or reuse wastes were made whenever feasible.

Some progress was made in addressing the hazardous waste issue in Saskatchewan. A survey of PCB equipment owners was carried out to explain and provide information about the phase out options that were being considered for implementation by all provinces. The survey was also used to obtain the opinions of the industry regarding PCB phase out plans. A report providing an overview of waste management in Saskatchewan was also prepared and included recommendations for improving the management of both solid wastes and hazardous wastes. In addition, the province is working jointly with the federal government and other provinces to develop a uniform policy and set of standards for the handling, transportation and disposal of hazardous wastes.

Municipal Waste Landfills and Liquid Waste Haulers

The Municipal Refuse Management Regulations which were enacted in 1986 pertain to the establishment and operation of municipal refuse disposal grounds in the province. A regulatory process was developed to ensure the environmentally sound siting, development, operation and monitoring of such facilities. The activities of the Department in this respect are summarized in the following table.

Table 4
Municipal Landfill Activities

Applications Received	13
Authorization to Establish Facilities Issued	12
Permits to Operate Issued	5
Landfill Site Closures	7
Complaints Received	50
Inspections	290
Bylaws Reviewed and Approved	12

The Regulations also require that all persons or companies involved in the business of transporting and disposing of liquid domestic wastes obtain a permit from the Department. A total of 181 permits have been issued.

Municipal landfill

Transportation of Dangerous Goods

The Transportation of Dangerous Goods Act (TDGA) and Regulations are designed to promote public safety in the transportation and handling of dangerous goods. The Department's role is to register all parties involved in the movement of hazardous waste and to ensure compliance with the legislation in the transport of the waste to treatment or disposal facilities.

Communication is maintained with other provincial jurisdictions regarding interprovincial waste movement. Registration activities are outlined in the following table.

Table 5
Transportation of Dangerous Goods Registrations

	1987-88	1986-87	1985-86	Total
Waste Generators	39	41	11	91
Waste Carriers	27	16	8	51
Waste Receivers	6	7	4	17

Pesticide Container Disposal Program

There are approximately one million pesticide containers sold annually in the province. Surveys conducted by the Saskatchewan Safety Council in 1981 and 1982 showed that a large number of these containers were not disposed of appropriately.

In response to numerous requests from concerned groups, the Pesticide Container Disposal Program was initiated in 1983. Approximately 70% of rural municipalities took advantage of the program the first year with the establishment of 170 sites. In a number of cases, urban and rural municipalities joined forces to provide appropriate and accessible sites.

The number of sites in the province have increased since the first year of the program to a number now totalling 270 sites. During 1987-88 the number of containers collected at the sites totalled 700,000 with 74 barrels of residue recovered for proper disposal.

Operation Recycle Program

The Operation Recycle Program provided for assistance in the collection of scrap vehicles throughout the province. This program was terminated effective July 1, 1987 while the collection and delivery of scrap vehicles continues to be accomplished through private contractors operating in the province.

Litter Control Act

The Litter Control Act was amended in October, 1987 to allow the introduction of non-refillable containers for soft drinks and beer. Considerable discussion took place with the various interest groups in developing a collection and recycling system to allow the introduction of aluminum cans. It is anticipated a system will be in place early in the next year.

Complaints under the province's Litter Control Act were also handled by the Air and Land Protection Branch. Approximately 30 complaints were received and acted upon ranging from failure to comply with bottle refund regulations to depositing of refuse on Crown Land.

Pesticide container disposal

Land Management Section

Reservoir Development Areas

Early in the year, responsibility for the Reservoir Development Area program was transferred to the Saskatchewan Water Corporation.

Development Proposals

The Section reviews those development proposals having environmental implications, particularly around waterbodies or other environmentally sensitive areas, to ensure that the proposals are not subject, by virtue of location, to various natural hazards and will not significantly impact on the surroundings, and to ensure that all aspects of good planning practice are considered.

During the fiscal year, 27 shoreland proposals, 35 rural residential proposals, 27 urban residential proposals, 41 commercial/industrial proposals, 36 proposals for municipal purposes, and 10 other proposals for various purposes were reviewed by Section staff. These 176 proposals provided for the creation of 1390 parcels intended for various purposes.

These proposals were referred to the Branch by Saskatchewan Urban Affairs and Saskatchewan Rural Development. After reviewing their environmental suitability and possible impact on other nearby uses, the Branch provided comments and guidelines to the referring departments.

Chemical Management Section

This Section continues to provide technical information and assistance to the public, industry and other government departments pertaining to the proper storage, use and handling of toxic or hazardous chemicals. Approximately 750 inquiries were handled by Section staff this year. Staff members also served on organizations such as the Canadian Council of Resource and Environment Ministers (CCREM) National Task Force on Leaking Storage Tanks and the Canadian Association of Pest Control Officials (CAPCO) throughout the year.

Hazardous Substances Regulations

The Hazardous Substances Regulations are being developed under The Environmental Management and Protection Act by Section staff as a means to prevent and reduce the release of hazardous substances to the environment. These draft regulations underwent extensive consideration, review and legal drafting processes throughout the year.

Institutional Chemical Collection Program

The Institutional Chemical Collection Program (ICCP) was initiated during 1986 in order to:

a) alleviate the immediate problem of a backlog of stored hazardous, deteriorated or outdated chemicals at schools and hospitals across the province; and

b) to prevent the reoccurrence of a similar problem in the future by providing technical advice and information concerning proper chemical management and laboratory safety.

The operation of the ICCP continued throughout the fiscal year and chemical collection visits concluded in March, 1988. Over the duration of the ICCP a total of 314 provincial institutions (198 secondary schools and 116 hospitals) received the services of the program. The total quantities and types of chemicals collected and packaged by Branch staff for treatment or consignment to a waste handling company for final disposal are summarized in Table 6.

Chemical packing procedure for institutional chemicals

Table 6
Summary of the Institutional Chemical Collection Program Statistics

Chemical Category	Hazardous Chemicals Consigned to a Waste Disposal Company		Hazardous Chemicals Treated By Department Staff	
	Volume (L)	Weight (Kg)	Volume (L)	Weight (Kg)
Inorganic Acids (A)	1978	43	21	4
Organic Bases and Inorganic Salts (B)	1805	1912	320	788
Organic Solids (C)	0	604	0	190
Organic Acids/ Solvents (D)	3461	272	635	37
Inorganic Oxidizers (E)	432	1252	1	5
Water/Air Reactive Chemicals (H)	47	381	0	0
Inorganic Cyanides (J)	25	43	7	57
TOTALS	**7748 (L)**	**4507 (Kg)**	**984 (L)**	**1081 (Kg)**

Staff members of the ICCP treated approximately 15% of the hazardous chemicals collected resulting in a $20,000.00 saving in disposal fees. Chemicals which could not be readily treated by staff members were packaged in 'lab packs' (205 L barrels) for consignment to a waste handling company and ultimate disposal in an environmentally sound manner.

During chemical collection visits staff members provided advice and answers to questions posed by teachers and laboratory managers regarding chemical storage, alternative less hazardous substitute chemicals and safety procedures. A document entitled 'A Guide to Chemical Management and Laboratory Safety in School Science Activities' was produced and distributed to all participating institutions and other interested organizations. This document was intended as a lasting reference and means to prevent the development of laboratory chemical related problems in the future. Several seminars and workshops were conducted over the duration of the ICCP in order to advocate the importance of chemical management and laboratory safety.

Hazardous Chemical Information

During 1987-88 the Chemical Management Section continued to build their reference library of chemical hazard related information. The list of hazardous chemical fact sheets was expanded over the year to include most agricultural chemicals used within the province. Chemical, health and safety information was further supplemented by the acquisition of a comprehensive computerized database. The Chemical Management Section is committed to providing the most accurate and recent information to the public, industry and other agencies by updating their references on an ongoing basis.

Pesticide Residue Disposal Project

Beginning in 1987-88 Saskatchewan Environment and Public Safety initiated a joint study with Environment Canada to investigate the use of line evaporation/degradation pits for the treatment and disposal of pesticide residues. Approximately 3000 litres of residues generated by the Pesticide Container Disposal Program were circulated through the evaporation/degradation pit over a five month period during 1987. Preliminary results indicated substantial reductions in volume and pesticide content of the residues undergoing treatment. The study is scheduled to continue until 1989.

Section staff provided extensive technical assistance in preparing and arranging for the disposal of residues generated by the Pesticide Container Disposal Program.

Water Quality Branch

D.A. Fast
Director

Objectives

- To protect and enhance the quality of Saskatchewan water resources for public safety and for beneficial uses.
- To prevent and abate water pollution from point sources such as industrial and municipal operation and from diffuse, non-point sources.

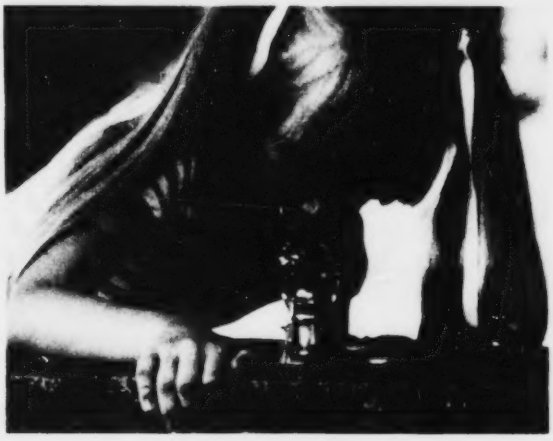
Activities

- Establish water quality objectives and standards for surface water and ground water.
- Establish design criteria, set standards, and review applications for the construction of industrial effluent works, drinking water works, sewage works and storm works.
- Establish guidelines and standards for the operation of drinking water works, industrial effluent works, and sewage works; set site specific limits and monitoring requirements for these works.
- Provide technical assistance and operator training to communities in identifying process problems, and in having qualified operators at drinking water and sewage works.
- Collect and interpret surface water quality, ground water quality and related data; process and store the data.
- Inspect, conduct tests, collect samples, investigate and gather information or require the client to do these things for industrial effluent works, drinking water works and sewage works.
- Investigate complaints, provide data and expert comment on water quality, pollution control and drinking water treatment to the public and private, public or government agencies.
- Consult with and maintain close touch with agencies such as the Saskatchewan Water Corporation and the Prairie Provinces Water Board (PPWB) on matters that relate to water quality.
- Regulate the application of chemicals used in or near surface water for the control of aquatic nuisances.
- Administer a certification program for operators of municipal drinking water and sewage works.
- Identify research requirements on water quality, water pollution, water treatment; consult with and provide comments to other agencies on their water research program.
- Work with and through other governments to ensure transboundary water contaminants do not harm the environment or health in neighboring provinces, states or in Saskatchewan.

Standards and Approvals Section

Drinking Water and Sewage Approvals

During the fiscal year, 284 Construction Approvals, 61 Minister's Orders and 85 Permits were issued by the branch for municipal, private and government works. Construction costs for the facilities were approximately $60 million. At year end, there were 536 and 571 municipal drinking water and sewage systems respectively. Permits are issued for existing sewage works and conditions are included on monitoring, discharge limits, reporting to the Department, and on other measures required at a particular site to ensure the protection of the environment and public health. Minister's Orders are issued for existing drinking water works.



Industrial Approvals and Inspections

During the fiscal year, 8 construction permits and 8 operating permits were issued. Site inspections and several meetings were conducted regarding these facilities.

Water Quality Management Section

Biocide Regulation

The branch issued 171 permits for the application of biocides to public surface water primarily for control of algae and other plant growth.

Treatment of the Saskatchewan River system for blackfly larviciding was continued by Saskatchewan Agriculture. River treatments using methoxychlor and various formulations of the biological agent BTH-14 were conducted in accordance with permit approval by Saskatchewan Environment and Public Safety. BTH-14 is a bacterium which is host specific to the larvae of blackflies and mosquitoes.

Surface Water Quality Monitoring

Water quality trends of Saskatchewan surface waters were regularly monitored. During the fiscal year approximately 18,000 samples were collected by the branch or by others on behalf of the Department. About 100,000 analyses were performed. A summary of sampling locations is shown in Table 7.

Table 7
Water Quality Sampling Statistics

	Total Samples	Total Analyses
Surface Water Basins		
Qu'Appelle	103	2987
North Saskatchewan River	26	754
South Saskatchewan River	86	2494
Saskatchewan River	23	667
Souris River	9	351
Missouri River	3	147
Northern Contract	16	640
Other	25	600
Municipal		
Water — Chemicals	1228	16652
Water — Bacteria	11819	11819
Sewage and Receiving Waters	832	19968
Industrial (Collected by Industry and by the Branch)	3532	31730
Special Projects		
Moose Jaw Mercury Control Project	42	294
Spring Runoff	35	875
Complaints	21	525
Plankton	28	28
Quality Control	21	525
Misc. (Including Spills)	149	3149
South Saskatchewan River Basin Project	47	1410
Total	**18044**	**95615**

Water quality monitoring

Data Management

The branch has 3 computer systems that are operated through Westbridge Computer Corporation. These systems are ESQUADAT, BIODAT, and WINDAT. The ESQUADAT system is used for handling chemical and bacteriological data for surface water, drinking water and wastewater. The BIODAT system handles biological data including algae information. Information on municipal water and sewage works and on the plant operators is on the WINDAT system. The branch also has microcomputers to compliment the above mainframe systems. These computer systems organize and sort the information, as well as assist in completing various graphs, calculations and statistics.

During the year a computer system was implemented to provide comments to communities on the meaning of their drinking water quality monitoring data for general chemical constituents.

Monitoring, Inspections and Technical Assistance Section

Seven regional offices were in operation during 1987-88. These offices are located in Swift Current, Estevan, Kindersley, Watrous, Melville, North Battleford and Tisdale. Staff in the regions carry out inspections and sampling at industrial effluent works, municipal water and sewage works and at surface water stations.

Municipal Inspections

Over 1,000 inspections of municipal water and sewage works were conducted by branch staff. Almost 300 visits were also made to municipalities to provide emergency or technical operating assistance and to follow-up on corrective measures.

Municipal Assessment and Certification Section

This section carried out nearly 200 inspections, handled 159 complaints about water and sewage works, and administered the Department's analytical support and operator training programs for municipalities.

Analytical Support Program

During 1987, municipalities submitted nearly 12,000 drinking water samples to the Provincial Laboratories for bacteriological analyses. This represented 97% of the samples required by the licenses issued by the branch and was a 5% increase over last year.

Approximately 70% of the municipalities participated in the Municipal Analysis Program. This program assists in the analytical costs of analyzing the chemical quality of drinking water, sewage discharges, and the quality of streams receiving sewage discharges. Special monitoring programs were co-ordinated concerning the levels of nitrates, fluoride, and trihalomethanes in drinking water.

Operator Training

At the end of the fiscal year, there were 236 certified operators for water and sewage works under the voluntary Operator Certification Program. Eighteen training sessions for plant operators were held during the year throughout the province, with a total attendance of 264.

The branch administered the following correspondence courses: Western Canada Water and Sewage course, California State University courses, Treatment Plant Supervision course, and Maintenance Management Correspondence course for operators of municipal water and sewage works.

Interagency Activities

During the fiscal year, branch personnel participated on 27 different committees/boards. These range from the National Water Quality Task Force and the Water Quality Committee for the Prairie Provinces Water Board to the Advisory Board at Kelsey Institute. Comments on some of the interagency activities are noted below:

Mercury in Saskatchewan Fish

Branch staff chaired an Interagency Mercury in Fish Committee, which reviews the results of mercury in fish in provincial waterbodies and makes recommendations to the public concerning fish consumption limits.

Effluent Irrigation

The branch co-ordinated activities with the Saskatchewan Water Corporation and Saskatchewan Agriculture on effluent irrigation. Effluent irrigation is a good environmental option for sewage disposal where suitable land is available. During the year, the branch published guidelines for the design, installation and operation of monitor wells at effluent irrigation and other wastewater disposal sites.

Prairie Provinces Water Board

A branch representative participated on a committee which is developing site specific water quality indicators for major streams at the interprovincial boundaries.

Saskatchewan Water Corporation

The Water Corporation Act requires the Department's review and approval of construction applications for water and sewage works prior to the issuance of a construction license by the Saskatchewan Water Corporation.

The branch worked with Corporation staff in investigating a number of sewage lagoon problems and on several special projects. One special project involved providing assistance to well owners in determining whether their submersible pump contained PCB contamination.

South Saskatchewan River Basin

The branch was involved with the design of the water quality component of the Canada-Saskatchewan South Saskatchewan River Basin Investigations. The branch will have the lead role in several projects in the coming year. These include the development of a water quality model. The model will be used to predict the impacts of proposed development and/or water uses.

Pesticides in Drinking Water Supplies

The branch completed an investigation of pesticides in drinking water supplies in co-operation with federal agencies. The survey involved 43 Saskatchewan communities. The majority of samples had no positive detections of the pesticides analyzed. Where pesticides were found, the levels were very low and well within safe levels for consumption.

Complaints and Information Requests

Approximately 210 complaints were handled about water quality, sewage disposal and biocide use in water.

Over 1,650 information and data requests from consultants, government agencies and private individuals were received.

Projects

Regulations and Guidelines

The 1968 regulations for waterworks and water pollution control were updated. The revised regulations require improved drinking water chlorination and a minimum of secondary sewage treatment.

The Aquatic Nuisance Control Guidelines were updated and new guidelines were published on monitor wells at wastewater disposal sites.

Dioxins

Dioxin monitoring continued in 1987 at the Weyerhaeuser Pulp Mill near Prince Albert. The results showed that dioxins and furans are not detectable in the discharge to the river or in the North Saskatchewan River near the mill. Sludge which is contained in the wastewater treatment system and in an on-site landfill area contained several different dioxin and furan compounds.

Water Quality Modelling

A water quality model was developed for Lake Diefenbaker. The model can predict the effects of point and non-point pollution sources on the growth of algae. The model will be used to evaluate development proposals to ensure long-term protection of Lake Diefenbaker water quality for municipal water supply, aquatic life, recreation and irrigation.

A water quality model for streams in the South Saskatchewan River Basin is being developed.

Regina Ground Water Quality

There are concerns about the possible contamination of the Regina Aquifers. The available data show localized contamination of the Condie Aquifer, but not of the deeper, Regina Aquifer.

The branch is undertaking a thorough investigation of the aquifers in conjunction with the City of Regina and industries. The investigation will include comprehensive monitoring of the aquifers, developing remedial measures where warranted, and developing guidelines for the long-term protection of the aquifers.

Rafferty/Alameda Reservoirs

Water quality modelling shows that the projects should have minimal impact on water quality at the Saskatchewan-North Dakota border. One predicted benefit of the reservoirs is a reduction in nutrient (phosphorus) loading to Lake Darling in North Dakota. The Minister's approval includes conditions to design and initiate a water quality monitoring program in the Souris River basin in Saskatchewan. The approval also requires the preparation of a plan for implementation of mitigative and remedial measures to protect long-term water quality in the new reservoirs and downstream river.

Saskatoon Sewage Treatment

The City of Saskatoon has agreed to implement additional treatment of the sewage in 1988-89 to reduce the phosphorus, suspended solids and organic loadings to the South Saskatchewan River. The City has also agreed to make further improvements by 1995 to meet secondary sewage treatment requirements.

The branch, the City of Saskatoon, the National Hydrology Research Centre and the University of Alberta plan to carry out a joint investigation of the impacts from the sewage on nutrient levels and weed growth in the river.

Surface Water Quality Objectives

Revised surface water quality objectives are being prepared for the province. The new objectives are intended to afford protection to specific water uses which include aquatic life, wildlife, recreation, crop irrigation, and livestock watering. In addition, the document will include guidelines for effluent mixing zones in surface waters.

Caged Fish Aquaculture

On the request of Saskatchewan Parks, Recreation and Culture, branch staff developed a method for estimating the carrying capacity of lakes for the production of caged fish. The method is based on the increase in phosphorus concentration in a lake by the aquaculture project and the protection of the lakes water quality.

Mines Pollution Control Branch

R.G. Barsi
Director

Objectives

- To ensure short and long-term protection of the environment at mining and milling operations.
- To protect the public from naturally occurring radiation hazards.

Activities

- Licensing; to issue and administer "approvals to operate" or "ministerial approvals" to mining companies.
- Inspections and monitoring; to routinely inspect mining operations and collect samples to determine compliance with license conditions and provincial regulations.
- Data handling; to review and analyze all environmental data related to the mining industry.
- Regulation development; to develop and update provincial regulations related to the mining industry.
- Radiation surveys; to conduct surveys to monitor areas where the public exposure to naturally occurring radiation is a concern.

Uranium Mines Section

The Uranium Mines Section is responsible for licensing, monitoring and inspecting all uranium and gold mining operations in the province. Staff visit the sites to perform inspections and take samples in and around the operations. Approvals to construct and to operate the facilities are administered by the Branch. In addition, companies are required to monitor all aspects of the environment on a regular basis and submit the data to the Department. This monitoring data resulted in more than 20,695 separate water quality analyses being performed from 193 different sample locations in over 1,408 sample submissions. Additional monitoring requirements include fish, sediments, macrophytes, air quality, and other biological media. The public has access to all licenses issued and the monitoring data.

Amok, Cluff Lake

Mining of the Claude open pit and D-P underground mine continued during the fiscal year.

Reprocessing of Phase I Leach Tails Residues was completed in February of 1988. The reprocessing was completed ahead of schedule without major problems being encountered.

The Company responded to all requirements of their Permit to Operate, MPCO-1.

At no time during the fiscal year did the final effluent discharged to the environment exceed the limits specified by the Department.

During the fiscal year, the inspectors from the Mines Pollution Control Branch inspected the Amok, Cluff Lake site 12 times.

Twenty-seven compliance water quality samples were taken at four different stations, and 525 analyses were performed.

Cluff Lake mine

Eldorado Resources Limited, Beaverlodge

Eldorado Resources' Beaverlodge operation near Uranium City has completed its second full year of transition phase environmental monitoring since the completion of the decommissioning work at the site. Remedial work was initiated at the outlet structures for Fookes and Marie Lakes as well as filling in slumped areas located on waste rock fill areas.

Branch staff inspected the site seven times during the fiscal year collecting 28 compliance water quality samples from 8 monitoring stations. A total of 1008 water quality analyses were performed.

Key Lake Mining Corporation, Key Lake

The Key Lake Mining Corporation's mining and milling facility at Key Lake completed its fourth year of operation on October 20, 1987.

No major modifications or changes were made to the facilities during the fiscal year.The company has completed mining of the Gaertner ore body and are in the process of developing a final decommissioning strategy for the mined out pit.

Construction activities for the development of the Deilmann ore body include the removal of overburden and the continued operation of the ground water dewatering system. Present scheduling indicates mining of the Deilmann ore body will commence in 1988.

The company contir ued to operate a batch liquid effluent discharge system in order to monitor the quality of the effluent prior to discharge to the environment.

The Branch conducted twelve inspections during the fiscal year. Twenty-six compliance water quality samples were taken at three different stations and 942 analyses were completed.

Eldor Mines; Rabbit Lake/Collins Bay

Permit to Operate Industrial Effluent or Sewage Works #MPCO-5 was issued on June 23, 1987. In the 1987-88 fiscal year, mining, pit expansion and ore removal continued at the Collins B-Zone. There were no major problems encountered. Ongoing geotechnical monitoring of the Collins Bay dyke continues to confirm the stability of the structure. Ore stockpiling and transportation of ore to the mill continued.

A request for expansion of the mining operations further north on the Harrison Peninsula was also handled by the Department during this fiscal year. Following a complete review, Environmental Assessment approval for the A,D and Eagle Point Zones was authorized on January 4, 1988.

The mill operation utilized only B-Zone ore feed. A new yellowcake dryer plant was commissioned in March, 1987. Improvements made during the previous years on the operation of the liquid effluent control system used to collect, handle and treat runoff and contaminated waters on the site continued to prove effective.

Monitoring of the effluent at the final point of control confirmed that all license conditions with respect to effluent limits were met.

The development of final design parameters for the in pit tailings placement system required additional testwork and monitoring during the fiscal year. Two reports updating the status were submitted, and a final report will be submitted to the regulatory agencies in the spring of 1988.

During 1987-88 there were 12 branch inspections conducted. Twenty-six compliance water quality samples were collected from five different locations and 1,160 separate analyses were performed.

Cigar Lake Mining Corporation, Cigar Lake

During 1987, the Cigar Lake Mining Corporation completed environmental impact studies related to their proposed test mine for the Cigar Lake ore body. Monitoring of the receiving area for waters from a groundwater pump test in March and April, 1987 showed that contaminants in the receiving area did not exceed surface water quality criteria, and the water was subsequently released.

Upon receipt of Ministerial Approval under The Environmental Assessment Act in October, 1987 Cigar Lake Mining Corporation commenced site preparation and facilities construction for the test mine project. By the end of March, 1988 several facilities had been constructed, including camp and office buildings, sewage disposal system, shop, warehouse, concrete batch plant, electrical infrastructure, mine shaft to 43 metres, fuel storage facilities, runoff water collection ditch, temporary runoff treatment pond, potable and industrial water treatment facilities, refuse disposal area, and miscellaneous facilities. The powerhouse and hoist room were under construction. The Branch was awaiting submission of plans for several waste control facilities, for review and subsequent issuance of construction and operating permits.

Three construction permits, MPCC-6, MPCC-7 and MPCC-8 were issued to Cigar Lake Mining Corporation for sanitary and industrial garbage disposal, camp water and sewage wastes and waste rock stockpile surface runoff treatment pond. Two operating permits issued, MPCO-8 and MPCO-9, for garbage disposal, domestic sewage collection and disposal, and for operation of potable waterworks.

Seven environmental inspections were conducted by the Mines Pollution Control Branch during the year.

As this test mine is under construction there were no industrial effluent discharges to the environment during the fiscal year.

Saskatchewan Mining Development Corporation, Star Lake Project

Star Lake was issued Ministerial Approval MPCO-10 and Minister's Order for the Operation of Waterworks MPCMO-1 on February 23, 1988.

The Star Lake site completed it's first year of successful operation at the end of December, 1987. The 21 Zone and the recently approved Rush Lake Zone will both be mined out by September, 1988 and November, 1988 respectively. Current ore reserves will allow milling to continue until at least the end of March, 1989.

During the 1987-88 fiscal year several modifications or improvements to the site were undertaken: the Blindman Tailings Management area was further dyked to increase its capacity; the T2 Effluent Polishing Pond was constructed; the T3 Diversion Dam was built to divert David Creek waters around the Crown Pillar area of the 21 Zone mine; the recirculation of Blindman waters back to the mill was initiated; and approval was given to add a second settling pond to the minewater treatment system.

Saskatchewan Mining Development Corporation was given the Department's approval to begin mining the Rush Lake Zone in October, 1987. By the end of November, 1987 the portal area was opened with full scale mining initiated in April, 1988.

The Star Lake site operated their effluent treatment system discharge to David Creek for a one month period during October, 1987. All license limits were met. Further modifications to the method of treatment are proposed for 1988.

The Branch carried out 12 site inspections during the fiscal year. A total of 26 compliance water quality samples were collected from 8 sites and analyzed for 1,080 parameters.

Royex Gold Mining Project — Jolu Project

1987 saw a continuation of test mining and evaluation work at both the Rod Zone and abandoned Decade Mine.

The original Ministerial Approval 37A was amended and extended to June 1, 1987, and followed by MPCO-6 for Phase II exploration of the Rod Zone Mine. MPCO-4 was issued May 28, 1987 for the dewatering and rehabilitation of the Decade decline to permit a geological evaluation. The mine was allowed to reflood in September, after the evaluation work was completed. Phase II exploration continued to the end of March, 1988 when it was nearing completion. Royex had determined that the Rod Zone could support a viable 300 ton per day mine/mill complex, and consequently was awaiting ministerial approval under The Environmental Assessment Act prior to commencing construction. Low groundwater inflow to the mine plus 100% recycle resulted in very little water discharged to the environment from the Rod Zone in 1987.

Twelve inspections were carried out during the year. A total of 15 compliance water quality samples were obtained and analyzed for 386 parameters.

Vista Mines

During 1987, extensive mineral exploration was conducted at this site. In 1987 the Department issued MPCO-7 authorizing the company to continue underground exploration and bulk sampling. The company commissioned a feasibility study on the existing mill facility as well as completed some upgrading work on the existing tailings management area.

During the fiscal year, five site inspections were conducted, 3 compliance water quality samples were taken from the mine water discharge and analyzed for 120 parameters.

Placer-Dome Inc., Seabee Project

During 1987, Placer-Dome initiated and completed a test mine project on the Seabee property, and collected environmental baseline data for an environmental impact statement in anticipation of a decision to proceed towards production.

Ministerial Approval MPCO-2, for the test mine was issued on May 28, 1987 to March 31, 1988.

High groundwater inflows plagued Placer from July 8 to completion of the project at the end of October. The quality of treated water entering nearby Laonil Lake remained acceptable throughout the project. The mining equipment was removed in February, 1988 via winter road. The mine site is mothballed, pending an evaluation and production decision by Placer and/or Claude Resources. If a decision is made not to proceed to production, the site will be decommissioned.

Eight environmental inspections were carried out during the year. Seven compliance water quality samples were obtained and analyzed for 322 parameters.

Technical Services Section

In early 1986, a Technical Services Section was established to ensure that all specialized technical needs of the Branch are provided. Because of the complex nature of mining operations and environmental protection at mines, necessary expertise is provided in a wide range of disciplines including radiation, industrial chemistry, water quality and aquatic biology, hydrology, engineering and contaminant pathway analyses.

The Section manages the Branch's involvement with environmental assessment of mining projects and provides detailed assessments of technical documents submitted by mining companies and consultants. The Section also formulates responses to policy papers from other agencies and branches. Special studies are conducted to address specific needs in the Branch's program to control pollution from mining operations in the province.

Radiation

The Branch has responsibilities for protection of the public from natural radiation hazards. Radon gas, which occurs naturally, can "build up" in some homes to levels which may cause health effects. The results of province-wide radon level surveys were published by the Section in 1985. Follow-up surveys initiated in 1987 will be completed in 1988. The Section received frequent inquiries from the public and sends out information on what radon is, what are the hazards, measurement techniques, action levels and radon reduction methods. Development of an information brochure that provides the answers to these inquiries was completed in early 1988.

Potash/Coal Section

The Mineral Industry Pollution Regulations require that all mines having discharges of industrial wastes apply for ministerial approval to operate. This Section regulates these discharges for the ten potash mines and five coal mines in the province. Through the submission of monitoring reports and by site inspections, environmental control is maintained.

Other mining operations in the province regulated in a similar way by this Section included a base metal mine, a salt mine, a peat producer and a potassium sulphate development.

A total of nineteen Ministerial Approvals were issued by this Section to mining observations during the year.

Potash Mining

Saskatchewan's potash mines are authorized by approvals under the regulations to store waste salt and brine generated by mining and refining operations in approved areas. Excess volumes of brine may be injected into briny aquifers but no other releases are allowed.

All mines are monitoring the effectiveness of the containment systems.

Brine Inflows at Potash Mines

Despite the continual efforts of the company, International Minerals and Chemicals, have been unable to stop the inflow of brine at their K-2 mine.

The Potash Company of America is examining the feasibility of mining some of the reserves lost to flooding last year by developing a solution mine.

Coal Mining

All five coal mines were licensed under the regulations and the quality and quantity of discharge of waters were monitored. No particular problems were encountered.

Environmental Assessment Branch

R.E. Walker
Director

Objectives

- To have prospective developers fully informed about Saskatchewan's environmental protection policies and regulatory requirements.
- To have all plans for future development activities in or near Saskatchewan fully evaluated as to the acceptability of their likely environmental implications **before** commitments to proceed with those plans are made.
- To have in Saskatchewan a system of reserves which exemplify and protect both unique and typical aspects of the province's natural heritage.

Activities

- Apprise prospective developers of provincial environmental requirements applicable to their development proposals, particularly those requirements under legislation administered by Saskatchewan Environment and Public Safety.
- Administer Saskatchewan's environmental assessment process in accordance with requirements and provisions of the province's Environmental Assessment Act, and in so doing:
  - review preliminary development concepts to help prospective developers identify potential environmental and socio-economic problems therewith and define the scope of any assessments which might be necessary to satisfactorily address those problems and produce environmentally sound development plans;
  - review each Environmental Impact Statement (EIS) submitted to the Department by a developer seeking ministerial approval under The Environmental Assessment Act, to ensure that the document provides a technically sound basis for both public evaluation of the proposed development's likely environmental implications and the minister's subsequent decision regarding if and how it may proceed;
  - facilitate public examination of and comment on each EIS in accordance with the requirements and provisions of The Environmental Assessment Act;
  - recommend to the Minister conditions which he might attach to his approval of each new development to increase the likelihood of its proceeding in an environmentally acceptable manner; and
  - monitor the implementation of plans approved under The Environmental Assessment Act to ensure developers' compliance with the terms and conditions of their approvals, and recommend appropriate action in any case where a developer fails to comply with those terms or conditions.

- Administer Saskatchewan's Ecological Reserves Act, and in so doing:
  - identify areas of the province worthy of reserve status;
  - arrange for official designation of those areas; and
  - establish conditions under which the reserves are to be managed and protected.
- Represent the Department on interagency and interjurisdictional committees and study teams attending to multidisciplinary environmental matters of importance to Saskatchewan.

Environmental Assessments

During the 1987-88 fiscal year, 55 new development proposals were submitted to the branch for formal review through the environmental assessment process. In addition, reviews of 22 proposals from the previous year continued in 1987-88. The status of the various proposals received or under review during the fiscal year was as follows:

Table 8
Projects Requiring an Impact Assessment or Undergoing Screening at Year End

Proponent	Project
Black Lake Indian Band Council	Access Trail, Uranium City to Rabbit Lake
Cigar Lake Mining Corporation	Permanent Access Road
Cigar Lake Mining Corporation	Waterbury Lake Uranium Development
City of Regina	Waste Management Study
Denison Mines Ltd.	Midwest Lake Uranium Development
Ducks Unlimited Canada	Jackfish Marsh Wetland Development Project
Kannata Highlands Ltd.	Kannata Valley Subdivision Development
Lenora Explorations/ Mary Ellen Resources Ltd.	Gold Mine Development, Uranium City Area
Minatco Ltd.	McClean Lake Uranium Development
Oakwood Petroleums Ltd.	Exploratory Gas Well, Abbey Area
Placer Dome Inc.	Seabee Gold Mine Development
Redberry Development Corporation	Recreational Subdivision Development, Redberry Lake
Royex Gold Mining Corporation	Jolu Gold Mine Development
R.M. of Hoodoo	Wakaw Lake Weir
Saskatchewan Mining Development Corporation	Amisk Lake Gold Mine Development
Saskatchewan Power Corporation	1988 Rural Gasification
University of Saskatchewan	Waste Management Facility Incinerator

Table 9
Projects Screened — Impact Assessment Not Required

Proponent	Project
Alphonse McCaffery	Campground and Boating Facilities, Turtle Lake
Bonanza Oil and Gas Ltd.	Gas Wells and Pipelines, Golden Prairie Area
Canada Northwest Energy Ltd.	Exploratory Gas Well, Abbey Area
Canada Northwest Energy Ltd.	Seismic Exploration, Shackleton North
Chevron Canada Resources Ltd.	White Creek Exploratory Oil Well
Consumers Co-operative Refinery Ltd.	Propane/Butane Pipeline, Regina

Table 9 continued

Ducks Unlimited Canada	Hoosier Wetland Development Project
Ducks Unlimited Canada	Lizard Lake Wetland Development Project
Ducks Unlimited Canada	Lowe Wetland Development Project
Ducks Unlimited Canada	Luck Lake Wetland Development Project
Ducks Unlimited Canada	Marshall Marsh Wetland Development Project
Ducks Unlimited Canada	Meacham Wetland Development Project
Ducks Unlimited Canada	Ranch Lake North Wetland Development Project
Ducks Unlimited Canada	Rokeby Marsh Wetland Development Project
Ducks Unlimited Canada	Russel Marsh Wetland Development Project
Ducks Unlimited Canada	Spy Hill Wetland Development Project
Ducks Unlimited Canada	Strembicki Wetland Development Project
Ducks Unlimited Canada	Turuk Wetland Development Project
Ducks Unlimited Canada	Wilbert South Wetland Development Project
Ekaton Industries Inc.	Kaolin Deposit Bulk Sampling, Wood Mountain
Home Oil Company Ltd.	Natural Gas Processing Plant, Estevan
Lone Pine Resources	Exploratory Gas Wells, Great Sand Hills
L. Teetaert	Bulk Fuel Tank Cleaning Project
Mark Resources Inc.	Exploratory Well Site, Burstall Sand Hills
Mark Resources Inc.	Gas Well, Great Sand Hills
Mark Resources Inc.	Natural Gas Sweetening and Dehydration Plant
Maryanne Petroleums Ltd.	Exploratory Drilling Program, Great Sand Hills
Mobil Oil Canada Ltd.	Celtic Multi-Zone Test and Fresh Water System
Norwood Industries Ltd.	Sawmill and Wood Treating Plant, Creighton
Panther Industries Ltd.	Sulphur Prilling Plant, Davidson
Petro-Canada Inc.	Exploratory Wells, Cabri Lake
Potash Company of America	Solution Mining Pilot Project, Patience Lake
PreCambrian Shield Resources Ltd.	Gas Field Development, Bigstick Lake
Producers Pipeline Inc.	Gas Plant, Dodsland Area
Rafferty Resources Corporation	Oilfield Waste Reclamation Facility
R. J. Henderson	Green Lake Lodge Tourist Camp Improvements
Saskatchewan Mining Development Corporation	Rush Lake Gold Ore Zone Development

Table 9 continued

Saskatchewan Power Corporation	Gas Pipeline, Bronson to Beacon Hill
Saskatchewan Power Corporation	1986 Rural Gasification Program
Saskatchewan Power Corporation	138 kV Transmission Line, Prince Albert to Meath Park
Saskatchewan Power Corporation	Tazin Lake Outlet Structure Rehabilitation
Saskatchewan Water Corporation	Riverhurst Irrigation Project
Sceptre Resources	Tangleflags North Steamflood Heavy Oil Project
Solex Energy Ltd.	Portable Gas Processing Plant
Uranerz Exploration and Mining Ltd.	Fox Lake Winter Haul Road
Westmin Resources Ltd.	Gas Gathering System and Compressor Station
Weyerhaeuser Canada Inc.	Bittern Lake Forest Haul Road
Weyerhaeuser Canada Inc.	Cowan Lake Forest Haul Road
Weyerhaeuser Canada Inc.	McDonnell Lake Forest Haul Road

Table 10
Assessment Process Completed

Proponent	Project
Cigar Lake Mining Corporation	Cigar Lake Test Mine
Eldorado Resources Ltd.	Rabbit Lake Uranium Development
Prairie Coal Ltd.	Poplar River Coal Mine Expansion
Saskatchewan Highways and Transportation	Highway 41, Melfort
Saskatchewan Power Corporation	Shand Thermal Generating Station
Saskatchewan Power Corporation	230 kV Transmission Line, Alberta-Saskatchewan Interconnection
Simpson Timber Company	South Weir Haul Road
Souris Basin Development Authority	Rafferty and Alameda Reservoirs

Table 11
Projects Deferred or Cancelled

Proponent	Project
Ocelot Industries Ltd.	Gas Well Brine Storage Pits, Hatton Gas Field
Saferco	Ammonia Fertilizer Manufacturing Plant

Other Reviews

In addition to the 77 projects undergoing formal environmental assessment review, the Environmental Assessment Branch was involved in the review of an additional 255 project referrals. These referrals comprised 69 subdivision applications, 82 referrals from Saskatchewan Water Corporation, 57 proposals related to oil and gas development, 11 proposals related to sand and gravel projects, 10 Treaty Indian Land Claims, 17 forest cutting plans and 9 miscellaneous referrals. Interest in oil and gas activity appeared to increase compared to the 1986-87 fiscal year. A total of 16 blocks (involving some 100,639 ha) and 88 smaller parcels of land located in sensitive rangelands or sand dune habitat were screened in advance of sales of petroleum and natural gas rights.

Committees/Studies

Ecological Reserves

Work began on posting the Assiniboine Slopes ecological reserve. This is an area of 2.9 square miles of land (750 hectares) straddling the Assiniboine River, 60 km east of Yorkton. The reserve is known for its high level of ecological variety and its generally undisturbed nature. Work continued toward the designation of several more ecological reserves, including a portion of the Athabasca Sand Dunes.

Wetlands Technical Advisory Committee

The branch continued to represent Saskatchewan Environment and Public Safety on the Wetlands Technical Advisory Committee. The purpose of this committee is to review proposals for water development projects which might affect waterways, lakes, and wetlands, to resolve any conflicts which might arise among wildlife, fisheries, agricultural and environmental interests and to encourage development of works which are in the best interest of the Province of Saskatchewan. The committee also includes representatives from the departments of Agriculture, Parks, Recreation and Culture, and the Saskatchewan Water Corporation. During the 1987-88 fiscal year, 57 projects were cleared by the Wetlands Technical Advisory Committee.

Environmental Guidelines

The branch continued to distribute environmental protection guidelines pertaining to roads, transmission lines, gravel pits, mineral exploration and heavy oil pilot projects. The guidelines for sand and gravel pits were republished following a minor update. Draft guidelines for protection of environmentally sensitive lands, primarily in relation to oil and gas exploration and development, were widely distributed to industry for their review and comments. Comments on the draft guidelines were received and the efficacy of the guidelines is being monitored prior to their finalization.

Protection of Environmentally Sensitive Lands

On an ongoing basis, staff of the Environmental Assessment Branch endeavour to identify environmentally sensitive areas within Saskatchewan, assess their vulnerability to different types of development activity and establish mitigation guidelines for prospective developers to follow in those parts of the province where development is expected to continue or increase.

Considerable effort was expended in 1987-88, in working with affected oil and gas companies, consultants, and other provincial and local government agencies in ensuring that proposed oil and gas projects in environmentally sensitive rangelands and dune sands were implemented in an environmentally acceptable manner. Emphasis was placed on project planning by the proponent, a process designed to assure that developers took responsibility for developing and implementing their own environmental protection plans as an integral part of their overall projects.

Existing co-operative arrangements were maintained with Saskatchewan Agriculture and Saskatchewan Energy and Mines and other affected agencies to facilitate environmental review of all development activities proposed for the most sensitive lands. Close liaison was also maintained with Saskatchewan Parks, Recreation and Culture as that department developed policies for oil and gas exploration and development on parks and resource lands.

Research and Special Projects

Canadian Council of Resource and Environment Ministers

The Canadian Council of Resource and Environment Ministers' (CCREM) programs address environmental and renewable resource issues which are common across the country.

The Minister of Environment and Public Safety is a member of the Council. Several department staff members participate in a variety of programs as requested by the Minister.

Under the Hazardous Waste Action Plan, which was initiated last year, studies continued to develop guidelines and codes of practice for safe emission levels and handling, transportation, storage and disposal of hazardous substances. Guidelines were adopted for cleanup of PCB's in soils.

The Report of the National Task Force on Environment and Economy was adopted by CCREM. The report recommends ways to integrate environmental considerations into economic development decision making.

Other programs examined water management issues, the pesticide registration process and co-ordination of environmental regulations and research across Canada.

Toxicology Research Centre

The Toxicology Research Centre is a joint undertaking of the University of Saskatchewan and the provincial government. The Department of Environment and Public Safety is the lead agency on behalf of the province.

Activities of the Centre relate to research and the provision of advice and analytical services on topics related to toxicology. Areas of interest include agricultural chemicals, quality of drinking water, environmental toxicology and related subjects. As in previous years, there were many demands on the services of the Centre.

Public Safety Division

Nick Surtees
Acting Executive Director

Mission

To provide safety standards to industry and the general public in the fields of boiler and pressure vessel installations; electrical installations; elevator installations; fire safety; gas installations; building and accessibility standards; and amusement ride safety.

Activities

Activities of the Public Safety Division are concentrated in five branches reporting to the Executive Director:

- Boiler and Pressure Vessel Safety Branch
- Electrical and Elevator Safety Branch
- Fire Commissioner's Branch
- Gas Safety Branch, and
- Building Standards Branch

Gas Safety Branch

Bob Therens
Acting Chief Gas Inspector

Objectives

- To administer the provisions of The Gas Inspection and Licensing Act; and
- To provide a high measure of public safety in respect to the manufacture, sale and installation of gas equipment for consumers and the licensing of fitters and contractors who are engaged in the work of gas installation.

Activities

- Inspect new installations and alterations, replacements or additions made to existing installations with priority given to the more hazardous;
- Re-inspect existing installations in domestic dwellings and in public and high occupancy buildings;
- License contractors, employers and tradespersons making installations; suppliers of consumer equipment; bulk propane dispensing plants and propane cylinder dealers;
- Examine gas appliances and equipment stocked for distribution within the province and may field test one-of-a-kind gas fired units not specifically covered by an authorized national standard.

Legislation and Regulations

The Gas Safety Branch administers The Gas Inspection and Licensing Act and Regulations thereunder. During the year under review, no new legislation was introduced.

Standards and Specifications

Under the auspices of the Canadian Gas Association and direction of the Interprovincial Gas Advisory Council work continues on the upgrading and development of standards for the manufacture and testing of consumer equipment and specific appliances. Three national authorities accredited by the Standards Council of Canada test to standards, and each provides a distinctive labelling service on appliances and equipment meeting specifications contained in authorized standards.

Certification, testing and labelling services acceptable to the province are those of the Canadian Standards Association, the Canadian Gas Association, and Underwriter's Laboratories of Canada. Each authority upon demand makes available to the branch confidential copies of test reports. To ensure maintenance of engineering and production standards, examinations of appliances and equipment are conducted by certification organization technicians at the production line level. Supply house, retail outlet and field observations are made by the branch inspectors.

Defects and unauthorized changes found on new production, stocked or installed equipment are ordered rectified by the manufacturers who violate terms of manufacture, certification listing and product labelling contracts.

Safety Program

Following established practice, field staff were actively engaged in development areas advising contractors, instructing tradespeople and participating at rural gasification program meetings, at which the inspector would invite and reply to public and contractor inquiry, acquaint consumers with the functions of the branch, and outline the principle requirements for safe, efficient gas utilization.

Natural and Propane Gas Consumers

As of March 31, 1988 approximately 279,366 consumers were connected to the Saskatchewan Power Corporation's natural gas distribution systems and an estimated 38,000 propane consumers were supplied by independent propane utilities.

Inspections

For the purposes of inspection the province is divided into nine districts with offices in Regina, Moose Jaw, Swift Current, Saskatoon, North Battleford, Humboldt, Estevan and Yorkton. Five inspectors, one Acting Inspector II and the Chief are assigned to Regina; two inspectors and one Acting Inspector II are assigned to Saskatoon; two inspectors in North Battleford and one each to the remaining districts.

New domestic installations made in cities and rural areas receive a first inspection from the utility which consists of visual inspection of equipment and a pressure test of the gas piping. The utility sets the meter and activates the equipment if deemed to be safe.

The Gas Safety Branch completes the follow-up or final inspection, this is a detailed operational checkout of appliances, safety controls, venting and fire prevention clearances. A check to ensure the equipment is approved is done on this inspection.

When installations fail to conform to the provincial minimum standards, inspectors list the deficiencies requiring correction. Immediate hazards are reported to contractors orally or by telephone, followed by a notification in writing stating the period of time in which corrections must be made.

Branch inspectors also attend the initial turn-on and test firing of commercial and industrial gas fired boilers and equipment with an input in excess of 1,000,000 b.t.u. per hour.

In total, 3,815 written notices requesting correction or removal of hazards to life, health or property were issued on new installations and to owners of existing installations.

Immediate hazards to life, health and property necessitate follow-up inspection. Lesser hazards are spot checked to determine the extent of corrective compliance.

Table 12
Number of Inspections by Type of Inspection

Type of Inspection	1987-88	1986-87
Domestic Final Inspection	8,469	10,594
Commercial Final Inspection	1,976	2,168
Activation of High Input Equipment	1,190	1,204
Additions (New and Used Appliances)	2,868	3,038
Re-inspections (Domestic and High Occupancy)	6,923	8,000
Temporary Heating (New Construction)	1,864	1,828
Replacements (Defective Appliances)	9,635	8,902
Piping Alterations and Underground Gas Lines	3,343	3,075
Investigations and Special Inspections	204	173
Trouble Calls (Consumer and Utility Requests), and Defect Re-inspections	11,045	12,940
Propane Storage and Dispensing Plant Inspections	242	207
Calls on Contractors and Not Home Cards	11,292	12,286
TOTAL	59,051	64,415
Miscellaneous		
Defects Issued	3,569	3,722
Defects Cleared	2,971	2,780
On Site Consultation, Air Tests	915	587

Accidents

Gas related accidents resulting in persons being hospitalized due to carbon monoxide poisoning, fire and explosions were investigated by the Gas Safety Branch.

Recourse to Bonds

Sureties were called upon to complete the work of several delinquent contractors and to correct installation defects left in suspense by business failures. Corrections were made without additional cost to consumers.

Re-inspections

Re-inspections of residential and high occupancy buildings continues. A total of 6,923 re-inspections were made and 35 percent of these revealed hazardous or clean up conditions on which 2,423 corrections orders were issued.

Re-inspections indicate a need for continuing education in the field of equipment maintenance and servicing. The program provides opportunity to evaluate equipment and bring to light that which is prone to failure or is potentially hazardous. Consumers were encouraged to have their equipment checked and serviced by a licensed gas contractor on an annual basis through the distribution of brochures to all natural gas consumers and through personal advice provided.

Public Safety

In light of continued failures of prefabricated metal chimneys discovered by inspectors, the Gas Safety Branch issued releases to the news media warning consumers of the potential hazards. Several television interviews were made in the interests of public safety.

Licensing

Under the provisions of The Gas Inspection and Licensing Act, propane bulk storage and cylinder filling plant operators, installation contractors, employers, fitters and wholesale suppliers of gas appliances and equipment are required to hold a license. Licenses are issued on a one year basis or for a term not exceeding five years to individuals or companies who comply with the conditions of licensing set forth in the Act and Regulations made thereunder.

The number of licenses in effect during the 1986-87 and 1987-88 fiscal years are shown on Table 13.

Table 13
Licenses In Effect Under The Gas Inspection and Licensing Act

Type of License	1987-88	1986-87
Domestic Gas Fitter	924	871
General Gas Fitter	1,076	962
Domestic Gas Contractor	284	257
General Gas Contractor	394	354
Limited Gas Contractor	53	59
Gas Supply House	19	19
Employers	56	56
Propane Filling Plants	378	
TOTAL	**3,184**	**2,905**

Electrical and Elevator Safety Branch

John Chin
Chief Inspector

Objectives

- To enforce and administer the provisions of The Electrical Inspection and Licensing Act, 1981, The Passenger and Freight Elevator Act, and The Amusement Ride Safety Act; and
- To provide a high measure of public safety with respect to electrical wiring, the sale and installation of electrical apparatus and material, the sale and installation of elevators, and licensing of persons engaged in electrical and elevator installations, and the operation of amusement rides.

Activities

- Examine new electrical installations, equipment, and alterations and additions made thereto;
- Re-inspect certain existing electrical installations;
- Examine all electrical equipment intended for distribution in the province;
- Inspect all passenger and freight elevators intended for use in the province;
- License contractors, employers and tradesmen making electrical installations, suppliers of electrical equipment, and, all elevators and elevator contractors; and
- Inspect amusement rides.

Electrical Safety

Inspections

For the purpose of conducting electrical inspections, the province is divided into 13 rural districts and two city districts, namely Regina and Saskatoon. Electrical inspectors for rural districts are located in North Battleford, Moose Jaw, Prince Albert, Tisdale, Yorkton, Swift Current and Estevan.

Under the provisions of The Electrical Inspection and Licensing Act, 1981, permits must be obtained for all new electrical installations, additions and alterations on consumer property, and lightning rod installations.

During the year under review, 1,057 permits for very minor installations were cleared without inspection. The inspection time saved through this policy was diverted to planned re-inspection of existing high-occupancy buildings and to responding to the increasing demand for information from the public and tradespeople.

In incorporated cities, sampling inspections were made before electrical wiring was covered; and on all but very minor installations, inspections were made upon completion. In other areas, inspections are deferred until after the installation has been completed, except for larger installations, which require scheduled visits.

If inspections reveal non-conformance to the Act or Regulations thereunder, the contractor is required to make the necessary alterations within a specified time. The same procedure is followed with respect to sub-standard lightning rod installations. Existing installations are re-inspected upon requests made by fire departments, insurance companies, utilities or contractors, and by individuals concerned about safety of wiring. Owners of installations constituting potential hazard are required to bring such installations up to standard within a specified time, which varies depending on the degree of hazard involved.

Upon examination of 22,364 installations during the period under review, 2,575 notices were issued requesting contractors or owners to remove hazards from defective installations. Of these defect notices, 400 were issued in connection with old, existing installations.

Licensing

The contractor, employer and journeyman making electrical installations, and every person engaged in the business of a supply house must hold an appropriate license as specified in The Electrical Inspection and Licensing Act, 1981.

The license indicates the qualifications of the holder and is used as a means of control in enforcing the Act and regulations thereunder. Table 14 shows the number of licenses issued to contractors, employers, journeymen and operators of supply houses, under authority of the Act during the fiscal years 1986-87 and 1987-88.

Table 14
Licenses Issued Under The Electrical Inspection and Licensing Act, 1981

Type of License	1987-88	1986-87
Contractor	**534**	**661**
Full — one-year	269	256
Full — five-year	163	204
Restricted — one-year	17	10
Restricted — five-year	8	13
Limited — one-year	75	77
Restricted — Lightning Rod — one-year	2	1
Employer	134	132
Journeyman	709	733
General	676	692
Restricted	33	41
Temporary	—	—
Supply House	29	26
TOTAL	**1,406**	**1,552**

Plans and Equipment Approvals

During the year under review, plans and equipment approvals for 425 institutional and industrial projects were reviewed and approved or commented on. There were 376 special acceptances of equipment of special design, after inspections and test by branch staff.

Elevator Safety

Inspections

For the purpose of conducting elevator inspections the province is divided into two areas, with inspectors located in Regina and Saskatoon.

The Passenger and Freight Elevator Act and Regulations made thereunder, provide for periodic inspection of passenger and freight elevators in the province and for the annual licensing of elevators and elevator contractors. They also require that plans and specifications of new installations be submitted to the branch for approval and registration.

During the fiscal year, the branch made 943 routine elevator re-inspections, 148 acceptance inspections and 104 special inspections. Special inspections are those made for insurance companies, those made for purposes of approving major changes in installations and those required to determine whether equipment falls under jurisdiction of the Act, whereas acceptance inspections are those done on new installations before they are permitted to be placed in service.

Licensing

Table 15 shows the number of annual licenses issued during the years 1986-87 and 1987-88.

New Installations

122 specifications for new installations and major alterations were approved and registered during the fiscal year, as shown in Table 16.

Table 15
Licenses Issued Under The Passenger and Freight Elevator Act

Type of License	1987-88	1986-87
Passenger elevator	1,200	1,125
Freight elevator	197	212
Hand-power freight	15	15
Hydraulic freight	77	74
Electric dumbwaiter	154	157
Handicapped lift	139	117
Manlift	54	54
Escalator	23*	20**
Workman's hoist	2	—
Chair lift	1	1
T-Bar	12	13
Rope tow	28	28
Elevator Contractor's — Class "A"	9	8
— Class "B"	16	17
— Class "C"	1	1
TOTAL	**1,928**	**1,842**

*Licenses issued cover 53 escalators
**Licenses issued cover 48 escalators

Table 16
Approvals and Registrations Issued Under The Passenger and Freight Elevator Act

Type of Installation	1987-88	1986-87
Passenger elevator	84	71
Freight elevator	6	3
Dumbwaiter	3	3
Handicapped lift	23	18
Manlift	—	—
Escalator	2	3
Workman's hoist	2	—
T-Bar	—	1
Rope tow	2	1
TOTAL	**122**	**100**

Amusement Ride Safety

Inspections

For the purpose of conducting inspections of amusement rides the province is divided into two areas, with inspectors located in Regina and Saskatoon.

The Amusement Ride Safety Act, enacted in July, 1986, governs the safe operation of amusement rides in the province. Under the provisions of the Act, every owner or manager of an amusement ride, their operators and employees, as well as passengers of the ride, must meet safety regulations before operating the ride.

During the year under review, 274 amusement rides throughout the province were inspected and one correction notice was issued to an amusement park owner.

Licensing

As the Regulations were being developed by the branch, no licenses, registration certificates, and certificates of inspection pertaining to amusement rides were issued.

Plans and Equipment Approvals

No plans or equipment pertaining to amusement rides were reviewed or approved during the fiscal year.

Inspection of amusement ride shaft connection

Boiler and Pressure Vessel Safety Branch

Nick Surtees
Chief Inspector

Objectives

- To administer the provisions of The Boiler and Pressure Vessel Act; and
- To establish and enforce minimum safety standards with respect to the design, construction, installation, operation and maintenance of both high and low pressure boilers, pressure vessels of all types, pressure plants and other related hazardous equipment.

Activities

- Inspect all pressure vessels and boilers used in the province;
- Inspect all new designs of boilers, pressure vessels and related equipment prior to installation;
- Examine and license all power engineers, refrigeration engineers, refrigeration plant operators, firemen and pressure welders who will be operating or repairing equipment in the province.

Legislation and Regulations

The Boiler and Pressure Vessel Safety Branch administers The Boiler and Pressure Vessel Act and Regulations made thereunder. During the year, the Act and Regulations Respecting Examinations and Certificates of Engineers and Firemen were amended to extend the period of registration of engineers certificates and renewal of fireman's certificates from one year to five years. The Boiler and Pressure Vessel Fees Regulations were amended to incorporate a reduction in registration fees as a result of reduced administrative costs afforded by the above amendments.

In the interest of uniformity of safety standards throughout Canada, the following codes and specifications have been adopted by Order-In-Council and are administered as part of the regulations under The Boiler and Pressure Vessel Act:

(a) C.S.A. Code B51;
(b) C.S.A. Code B52;
(c) A.N.S.I. Code for pressure piping;
(d) A.S.M.E. Code for boilers, pressure vessels and pressure welding, sections one to eleven inclusive;
(e) Department of Transport specifications for construction and testing of liquefied propane portable cylinders.

Inspections

The Boiler and Pressure Vessel Act provides for periodic inspections of all high pressure boilers in power plants, low pressure boilers in heating plants and all other pressure vessels and pressure plants used in connection with air, hot water, steam, oil, liquefied propane, compressed gas or for refrigeration purposes. It also provides for shop inspection of all pressure vessel construction performed in manufacturing plants.

During the year under review, inspectors made a total of 6,500 inspections. Included in this total were inspections of 352 new boilers, 538 pressure vessels and 51 refrigeration plants which were installed in the province. Of these, 241 were manufactured in the province and were shop inspected by inspectors during construction.

During the fiscal year, 8 new sites were reviewed and licensed for the storage and distribution of anhydrous ammonia.

Inspectors also reset and sealed 963 safety valves, mostly used on oil field vessels.

A total of 1,319 improvement orders, or recommendations pertaining to improper or hazardous conditions were made by branch inspectors in accordance with The Boiler and Pressure Vessel Act, and Regulations thereunder.

Under contract arrangements with Public Works Canada, 301 inspections were made under that department's Safety Code.

The number of inspections under The Boiler and Pressure Vessel Act during 1986-87 and 1987-88 are shown below in Table 17.

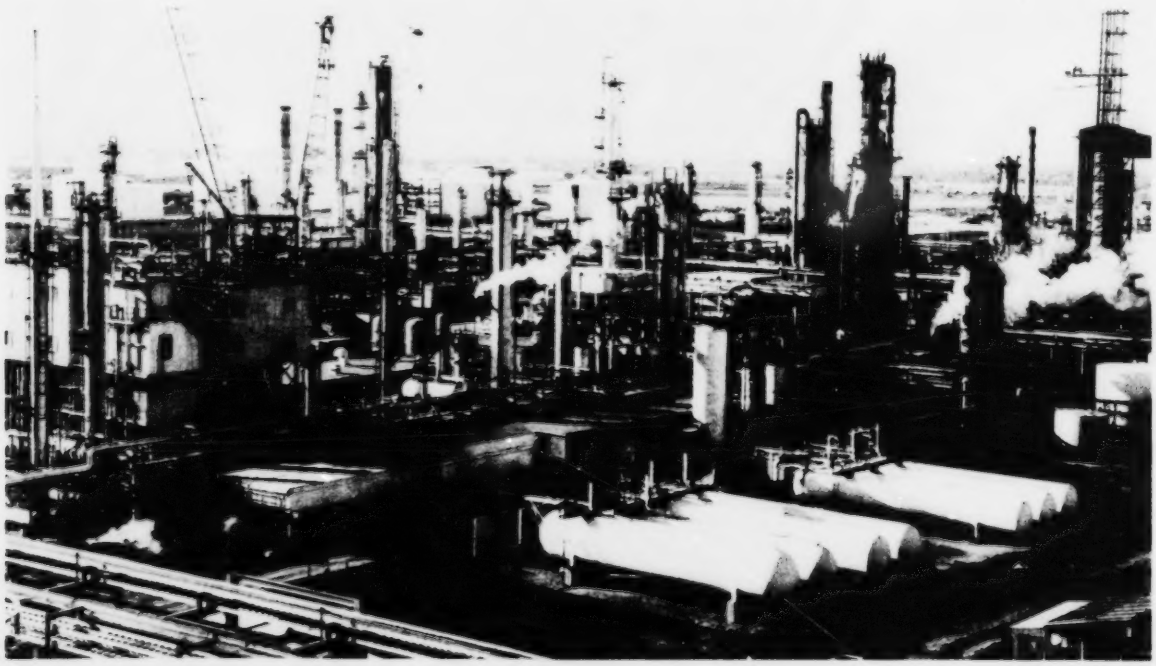
Table 17
Number of Inspections Under The Boiler and Pressure Vessel Act

Type of Inspections	1987-88	1986-87
Boilers	3,963	5,327
Pressure Vessels	2,072	3,523
Refrigeration Plants	368	651
Anhydrous Ammonia Storage and Distribution Facilities	101	151
TOTAL	**6,504**	**9,652**

Approval and Registration of Design

As provided in the regulations under The Boiler and Pressure Vessel Act, design drawings and complete specifications of every new design of a boiler, pressure vessel or fitting to be used in connection therewith, for use in the province, must be submitted to the office of the chief inspector for approval and registration before construction may legally commence.

During the year under review, 1,342 new designs were received and checked for compliance with the various regulations in force and the engineering codes adopted. Of these 1,230 were registered and 112 were rejected. These numbers include 162 welding procedures, some of which were single units, but most of which were in multiple groups.



Pressure vessel installations in an oil refinery complex

Engineers' and Fireman's Qualifications, 1987

Every engineer or fireman responsible for the operation of a high pressure boiler, a low pressure boiler of 300 or more kilowatts, a steam plant, or refrigeration plant, must hold a certificate of an appropriate class, as specified in The Boiler and Pressure Vessel Act. Such certificates are issued to persons who have the necessary qualifications and pass an examination.

All permanent certificates are valid for as long as they continue to be registered for a further five year period with the branch. Temporary certificates are valid for one year from the date of issue and may be renewed without examination, if application for renewal is made in accordance with the regulations.

Under Section 29 of The Boiler and Pressure Vessel Act, the chief inspector may, in exceptional circumstances, issue a permit for a limited period of time authorizing the operation of a steam plant by a person holding a certificate one class lower than the appropriate class.

Table 18 shows certificates issued in each classification and the number of examination papers written in 1987.

Table 18
Engineers' and Fireman's Qualifications, 1987

Type of Certificate of Examination	Examination Papers Written	Certificates Issued	Annual Registrations
First Class	31	3	156
Second Class	106	17*	288
Third Class	223	29***	448
Fourth Class	314	141**	1,064
Fifth Class	103	83	581
Heating Plant Engineer's	—	—	4
Refrigeration Engineer's	80	74*	547
Permanent Certificates	857	346	3,088
Provisional	—	—	
Special Provisional	1	166	
Fireman's	417	2,950	
Refrigeration Operator's	40	280	
Temporary Certificates	458	3,396	
Thirty-Day Permits	—	30	
Ninety-Day Permits	—	116	

Note: The above totals include the following certificates issued on an exchange with other provinces and duplicate certificates issued:

2 Second Class Certificates
2 Third Class Certificates
14 Fourth Class Certificates
* Indicates duplicate certificate issued.

Pressure Welding Qualifications

Welding Regulations under The Boiler and Pressure Vessel Act, provide that any pressure welding on a boiler, pressure vessel, pressure piping, or pressure plant may be done only by persons authorized by the Boiler and Pressure Vessel Safety Branch.

Welding authorizations are issued to persons who have passed a welder's qualification test, supervised by an inspector appointed under The Boiler and Pressure Vessel Act. They are renewable eighteen months from the test date, subject to testing.

The number of welding qualification tests conducted during the 1986-87 and 1987-88 fiscal years are shown below in Table 19.

Accidents

During the past year, two accidents were reported and investigated. Investigations revealed these accidents were caused by malfunction of designed safety fittings possibly combined with human error.

Table 19
Welding Qualification Tests

Type of Test	1987-88	1986-87
Qualification tests (each for four positions)	828	683
Pipeline and other special tests	294	199
TOTAL TESTS	**1,122**	**882**

Fire Commissioner's Branch

Vern Bartlett
Fire Commissioner

Objectives

- To administer The Fire Prevention Act, 1980;
- To provide a high measure of public safety; and
- To minimize property loss as a result of fire.

Activities

- Foster fire prevention;
- Collect and disseminate information regarding fires in the province;
- Investigate or hold inquiries into any fire, where considered necessary or to ascertain cause, origin and circumstances;
- Inspect buildings or premises and order remedy or removal of conditions likely to cause fires;
- Provide training in firefighting and fire prevention;
- Authorize and/or undertake surveys and make recommendations respecting fire equipment and fire protection and provide assistance to other government departments, municipalities, industry, organizations, business committees and individuals with respect to fire safety measures; and
- Examine plans and specifications for public and other buildings as required by regulations.

The Annual Report of the Provincial Fire Commissioner is published separately, based on the same fiscal year as is this report. It contains more detailed information on the activities of the Fire Commissioner's Branch, the causes of fires and the extent of fire loss in Saskatchewan.

Legislation and Regulations

The Fire Commissioner's Branch enforces The Fire Prevention Act, 1980 with general provisions applying to all property and the regulations enacted thereunder.

In addition, the branch enforces those regulations with respect to fire protection adopted under The Housing and Special-care Homes Act; assists in the enforcement of municipal fire prevention by-laws and provides consultation and assistance for government projects and projects receiving government grants.

Inspections

The province is divided into eight inspection districts. Fire prevention officers are based in North Battleford, Prince Albert, Regina, Saskatoon, Swift Current and Yorkton. The Estevan, Moose Jaw and Weyburn districts are serviced by inspectors based in Regina. Of the seven inspectors based in Regina, four conduct the fire training program.

Inspecting automatic sprinkler system

Inspectors (fire prevention officers) of the Fire Commissioner's Branch carried out an inspection program in 1987-88 in various classes of buildings with the exception of dwellings, where inspections were made only as a result of a complaint or obvious hazard. Inspection of dwellings by local authorities is encouraged so the branch can minimize the large inspection staff which would otherwise be required for this activity. Hospitals, institutional buildings, schools and other places of public assembly were inspected in the interest of fire safety. Government-owned buildings were also inspected for fire safety and evacuation purposes.

Routine inspections were conducted during the fiscal year in 166 towns, villages and hamlets.

During the period under review, branch fire prevention officers made 4,915 inspections excluding oil burner inspections, which are mentioned elsewhere in this report. Of this number, 1,005 were special inspections and 664 were re-inspection follow-ups on previous orders. A total of 618 orders to remedy certain conditions within specified periods of time were issued.

Inspection and improvement orders are shown in Table 20 according to class of property inspected.

Table 20
Inspections and Improvement Orders by Property Classification

Class of Property	Inspection (calls)	Improvement Orders Issued
Agriplexes	5	2
Amusement Centres (arcades)	8	—
Ball Parks	7	—
Bowling Alleys	14	2
Change Houses	2	—
Churches	334	16
Clubs	20	1
Court Rooms	1	—
Day Care Centres	7	2
Funeral Homes	3	—
Halls	368	54
Libraries	18	2
Licensed Dining Rooms	—	—
Museums	23	1
Pool Rooms	2	—
Restaurants (cafes)	194	18
Rinks	381	77
Senior Citizen Centres	98	13
Schools (sheltered workshops, activity centres)	401	115
Swimming Pools	8	2
Theatres	14	—
Undertaking Premises	—	—
Assembly	1,908	305
Correctional Centres	15	5
Hospitals	141	15
Hostels	6	—
Jails	1	—
Nursing Homes	95	9
Rehabilitation Centres	5	—
Institutional	263	29
Apartments	157	3
Approved Homes	31	1
Cabins	6	1
Convents, Monasteries	7	2
Dormitories	12	—
Group Homes	31	—
Houses	48	2
Hotels	308	131
Lodging Houses	11	3
Mobile Homes	5	—

Table 20 continued

Motels	77	13
Summer Camp Buildings	19	—
Residential	**712**	**191**
Banks (Credit Unions)	51	—
Barber and Hairdressing Shops	17	—
Clinics (medical and veterinary)	12	2
Health Spas	2	1
Laundromats and Drycleaners	13	—
Offices	339	8
Radio Stations	1	—
Business	**435**	**11**
Car Washes	6	—
Department Stores	4	1
Exhibition Halls	5	—
Shops	3	1
Stores	390	10
Supermarkets	34	—
Mercantile	**442**	**12**
Above and Underground Tanks	47	12
Aircraft Hangers	5	—
Auto Body Shops	17	—
Bakeries	8	1
Bulk Oil Plants (propane)	208	31
Cold Storage Plants	1	—
Concrete Plants	5	—
Creameries and Dairies	—	—
Factories	41	—
Fertilizer Buildings	4	—
Fire Stations	78	—
Hatcheries	1	—
Lumber Yards	17	2
Machine Shops (metal, welding)	27	1
Meat Packers	1	—
Mills	3	—
Oil Field Supplies	13	—
Plumbing and Heating Shops	6	—
Power Houses	2	—
Printing Shops	4	—
Pump Houses	19	—
Repair Garages (implements)	244	11
Service Stations	203	9
Storage Garages and Rooms	52	2
Upholstery Shops	10	—

Table 20 continued

Warehouses (storage sheds)	96	1
Water Treatment Plants	18	—
Well Drilling	—	—
Woodworking Factories (shops)	11	—
Workshops	14	—
Industrial	**1,155**	**70**
TOTAL	**4,915**	**618**

Plans and Specifications

During the fiscal year, 1,105 plans and specifications for new buildings, or additions to existing buildings, were reviewed. Of these 412 were approved with minor provisions and 614 were approved subject to alterations. Approval was not given in 79 examinations, either because of requirements for major redesign or because the review was only advisory. Sketches and drawings which were reviewed in consultation with architects and other interested persons previous to the preparation of preliminary and/or final drawings totalled 109.

As in previous years, plans required to be submitted were examined for compliance with The Flammable Liquids Regulations, The Hotel Regulations, The Hospital Fire Regulations, The Regulations Governing Fire Safety in Educational Buildings, The Regulations Governing Installation of Automatic Sprinkler Systems, and pertinent sections of the regulations under The Housing and Special-care Homes Act.

In examining plans submitted for government buildings and plans voluntarily submitted for structures such as churches, lodge rooms, and dry cleaning plants, the Fire Commissioner's Branch continued to apply the National Building Code of Canada as widely as possible. Codes of the National Fire Prevention Association and other standards of good practice are also used for this purpose.

The following table shows the number of plans and specifications reviewed since 1985-86.

Table 21
Plans and Specifications Reviewed by Disposition

Disposition	1987-88	1986-87	1985-86
Approved	412	401	401
Approved Subject to Alteration	614	883	698
Rejected or Pending	79	145	100
Design Consultations	109		
TOTAL	**1,214**	**1,429**	**1,199**

Fire Investigation

During 1987, 1,085 investigation reports were submitted by police and the Fire Commissioner's staff Fire Commissioner's staff participated in 111 investigations including cases in which arson was suspected, and cases in which, for fire prevention reasons, it would be in the public's interest to determine the cause of the fire. While fire prevention officers made a number of investigations unassisted, they frequently aided law enforcement officers in determining the cause of the fire, whether accidental or intentional in origin. The results and disposition of the Fire Crime Report investigations are illustrated in Table 22. It should be noted that all fires reported are investigated for cause, origin and circumstance by either the Local Assistant to the Fire Commissioner (secretary-treasurers, fire chiefs, and their staff) or police, insurance agencies, special investigation units, the Fire Commissioner's Branch or a combination of these forces.

Table 22
Results and Disposition of Fire Crime Report Investigations, 1987

Disposition	Number
Total number of investigation master records	256
Suspect segments listed	267
Juvenile male suspects	11
Juvenile female suspects	1
Male adult suspects	48
Female adult suspects	9
Unfounded arson investigations	67
Persons suspected/concluded	30
Charges laid	39
Investigations — persons unknown	131

Fire Record

Under the provisions of The Fire Prevention Act, 1980 the Fire Commissioner is required to maintain a record of fires occurring in the province, including facts relating to origin and circumstances, as determined by Fire Commissioner's Branch investigations, reports of fire chiefs, insurance adjusters and police. Data contained in reports of fires is summarized in the Annual Report of the Provincial Fire Commissioner.

A total of 2,810 fires was reported in 1987. Electricity was the largest single cause of fire, accounting for 723 fires - 25.7% of the total number of fires. Other leading causes were: coal or wood (15.4% - 432 fires), flammable liquids (15.2% - 428 fires), and smokers' materials (9.8% - 276 fires).

The property loss for 1987 was $23,440,453. Fires in one and two family dwellings continued to be highest in number; in 1987, 25.48 % of all fires reported were in dwellings. This represents a total of 716 fires with property loss of $8,190,137 - 34.94% of 1987 dollar loss.

The number of lives lost in fires in Saskatchewan increased in 1987, 33 persons (13 men, 7 women and 13 children) lost their lives in fires.

Oil Burners

The Fire Prevention Act, 1980 and Regulations thereunder require that distributors and wholesalers of oil burners obtain an annual licence, and that firms or persons installing and servicing oil-burning equipment take out an annual or quinquennial licence, as authorized by the Fire Commissioner, for such work. The number of licenses and the number of oil burner installation permits issued during the fiscal year ended March 31, 1988, are shown in Table 23.

Table 23
Oil Burner Licenses and Permits Issued Under The Fire Prevention Act, 1980

Type of License or Permit	1987-88
Wholesalers or Manufacturers (annual)	7
Installers (annual)	18
Installers (quinquennial)	34
Total Oil Burner Licenses	**59**
Total Oil Burner Permits (annual)	9

Study group considering problems at Hospital and Special Care Home Emergency Planning Seminar

Fire Prevention

During the year under review, fire prevention and fire training films were widely distributed throughout the province. These films were used by schools, fire departments and various organizations. These films are maintained in the library of Educational Resources Distribution, Saskatchewan Education, and bookings for such films can be made through them. Some films, slides and VCR tapes are also available from the Fire Commissioner's Branch.

The Fire Commissioner's Branch continued to advise municipal councils and fire departments on fire protection requirements. A total of 95 fire department surveys were made during the year. Inspectors advised institutions, hospitals and hotels on fire emergency programs, fire exit drills and other safety matters. In addition, inspectors attended 166 special meetings with fire chiefs, local authorities and other persons concerned with fire prevention. The fire prevention education program is summarized in Table 24.

Table 24
Selected Activities in Fire Prevention Education

Selected Activities	Number of Meetings	Attendance
Public Meetings	10	249
School Lectures	104	7,785
Other Lectures and Demonstrations	33	1,168
Film Showings	429	10,206
Fire Department Meetings	25	178
Municipal Council Conferences	5	21
Meetings with School Boards	3	8
Meetings with Hospital Boards	4	126
Meetings with Fire Chiefs	43	—
Court Cases	19	—
School Fire Drills	16	2,529
Building/Design Consultants	96	—
Learn Not to Burn In-Service Programs	7	231

Note: Attendance figures are not recorded for all activities

Fire Prevention Week

In 1987, the week of October 4 to 10 was designated as Fire Prevention Week and was emphasized by means of lectures to school children, distribution of films, special fire prevention literature, news releases and special messages from both the Minister-In-Charge of The Fire Prevention Act, 1980, and the Fire Commissioner.

The Fire Commissioner's Branch again sponsored the Annual Fire Prevention Poster Competition for public and high schools. Thirty-one cash awards were provided. The competition was divided into eight groups, covering Grades 1 to 12 in four divisions for city and rural school categories. A total of 3,800 entries were received. Winners of the contest were notified of their awards by the Minister-In-Charge of The Fire Prevention Act, 1980. The awards were made public through the media.

Firefighter's Training and Fire Prevention Program

In 1987-88 training schools for volunteer firefighter's were conducted in 96 towns and villages, and the self-contained breathing apparatus course module was delivered to one paid fire department. For the first time it was decided to present the complete Level 1 training package to a paid fire department. The Prince Albert Fire Department was chosen to be the recipient of this training and six of the seventeen Level 1 modules were presented to forty-four full-time firefighters. Of 1,138 students registered for firefighting training, 1,010 completed training courses and received certificates. Fire emergency training was given to sixty-three hospitals and nursing homes and 1,475 persons attended this training.

Building Standards Branch

Les Harmsworth
Chief Inspector

Objectives

- To provide minimum safety standards for the public with respect to the design, construction, use and occupancy of buildings;
- To provide standards that will ensure that an appropriate range of buildings will be accessible to persons with physical disabilities; and
- To administer the provisions of The Uniform Building and Accessibility Standards Act and Regulations.

Activities

- Establish minimum safety standards with respect to the design, construction, use and occupancy of buildings;
- Provide requirements that will ensure an appropriate range of new buildings will be accessible to persons with physical disabilities;
- Assist local authorities with information and advice to enable them to properly administer and enforce the provisions of The Uniform Building and Accessibility Standards Act and Regulations;
- Provide assistance to building inspectors in the interpretation of the Act and Regulations and advice when needed for the performance of their duties;
- Liaise with the building departments of other provinces and territories, the Associate Committee on the National Building Code of Canada and other appropriate organizations to promote the development of the National Building Code and the Saskatchewan Building and Accessibility Standards Regulations; and
- Inspect public arenas in the interests of public safety and advise Arena Management Boards on necessary maintenance and on an appropriate course of action where structural problems are evident. Approximately 40 arenas were inspected with reports being submitted to the Arena Management Boards.

Legislation and Regulations

The Uniform Building and Accessibility Standards Amendment Act was passed during this fiscal year.

Further sections of The Uniform Building and Accessibility Standards were proclaimed. These sections made possible the writing of regulations and the organization of local authorities for the coming into force of the Act.

Copies of the Office Consolidation of the Uniform Building and Accessibility Standards (UBAS) Act and the UBAS Amending Act were sent to all urban and rural municipalities with letters accompanying and separately explaining the significance of the Act to them and providing interpretations and advice.

A number of submissions were made to the Associate Committee on the National Building Code requesting changes to this document. These submissions were well received and a substantial number of the requested changes have been accepted.

A number of requests for assistance and advice in building code related matters and advice in the interpretation of the National Building Code were received from municipalities, building inspectors and the public. These requests were complied with.

Arrangements were made for presentations on the UBAS Act and Regulations to building inspectors, urban and rural administrators and clerks throughout the province.

Saskatchewan Emergency Measures Organization

M.G. Hegan
Executive Director

A.T. Auser
Director

Objectives

- To develop an effective emergency response structure at both the provincial and municipal levels of government to ensure the survival and recovery of our citizens and communities from any peacetime emergency or disaster.
- To enhance the national capability to respond to any national emergency.

Activities

- Ensure all departments and agencies develop a response capability for meeting their own emergencies as well as providing assistance to municipalities and other departments as required.
- Encourage and assist municipalities with emergency planning, training and exercises to provide a greater capability to respond to emergencies.
- Encourage development of Mutual Aid Areas so all resources in an area can be brought to bear on any emergency.
- Develop programs to ensure the government will be able to continue normal or near normal operations during a major emergency or disaster.
- Utilize federal funding available under the Joint Emergency Planning Program to further the development of emergency planning in Saskatchewan.
- Develop and conduct training programs to meet the emergency planning need of departments, agencies and municipalities.

Provincial Emergency Preparedness

The Cabinet Directive approved by Cabinet in February, 1986, which outlined the emergency planning responsibilities of departments and agencies is the guiding document for provincial emergency planning. Changes in organization, staff and responsibilities of various departments and agencies necessitated updating of the Cabinet Directive to reflect these changes and also required the appointment of several new Emergency Planning Officers and alternates. Training of Emergency Planning Officers and alternates continued with attendance at provincial training course at Echo Valley Conference Centre, Fort Qu'Appelle and appropriate federal courses at the Emergency Preparedness College, Arnprior, Ontario.

No changes were necessary in the boundaries of the eleven provincial emergency planning districts. District Emergency Planning Committee members for each district continue to be appointed by departments and agencies and receive training at provincial EMO courses and federal emergency planning courses as available. District meetings will be held when all Committee members have been appointed.

Municipal Emergency Preparedness

Municipal emergency planning remained one of our top priorities in 1987-88 in response to the continuing interest and concern by municipalities with their capability to respond to emergencies. The Municipal Emergency Planning Consultants encouraged and assisted with the formation of municipal Emergency Measures Organizations and Mutual Aid Areas, as well as promoting paper exercises and community exercises where communities had advanced to the stage where it was time to test the emergency plan. They also assisted Mutual Aid Areas to utilize the Joint Emergency Planning Program to improve the emergency response capability of the area.

In all, over 350 municipal visits were made, as well as contact through letters, phone calls and training courses with the following results:

—Approximately 87 municipal Emergency Measures Organizations were established, including both urban and rural.

—There were 16 more Mutual Aid Areas formed which included the majority of the newly organized Emergency Measures Organizations.

—There were 19 municipal paper exercises and 4 Mutual Aid Area exercises conducted.

—Training continued with two orientation courses, one health course, one co-ordinators conference, one health conference and two courses for municipal officials being held. In response to the request from Mutual Aid Areas, 11 Dangerous Goods Courses were conducted at the municipal level by Saskatchewan Emergency Measures Organization Consultants. Total attendance at all courses and conferences exceeded 650.

—Suitable municipal candidates continued to take advantage of the training offered at the federal Emergency Preparedness College at Arnprior, Ontario.

Continuity of Government

Proposals have been submitted to the federal government to utilize the Continuity of Government Program in Saskatchewan. The program involves the provision of a Regional Emergency Government Headquarters in time of a national emergency. This structure could also serve as a training facility for fire fighters, the Police Commission and emergency medical training.

A preliminary design study is under consideration.

Joint Emergency Planning Program (JEPP)

The Joint Emergency Planning Program is a federal program which provides 6.5 million dollars across Canada to help fund those projects which will enhance the emergency response capabilities at both the provincial and municipal levels. Following the signing of a Memorandum of Understanding between the Government of Canada and the Province of Saskatchewan in 1985, the Saskatchewan Emergency Measures Organization negotiated a five year emergency preparedness program with Emergency Preparedness Canada which identified joint priorities and interest areas that qualified for funding under JEPP. The budget for year three of the program, 1987-88, received the approval of Emergency Preparedness Canada.

In 1987-88 over $482,000 in federal funding for JEPP projects was approved for the Province of Saskatchewan. This amount included $152,000 for our provincial five year program and $330,000 for 19 municipal projects which were submitted. During the same period, 9 municipal projects received funding under JEPP totalling $104,000 while our provincial program was eligible for $139,000. This has contributed greatly to increasing the emergency response capabilities of municipalities by providing funding for planning, training and purchase of equipment.

Legislation

The objective is to replace the existing Civil Defence and Disaster Act with the Emergency Planning Act.

The original draft of the new Emergency Planning Act has been before the Legislative Review Committee, and drafting instructions have been issued to prepare the legislation for introduction to the House.

Department officials are still optimistic that this legislation can be passed prior to the legislature going into recess for the summer of 1988.

National Emergency Arrangements (NEA)

In accordance with the Memorandum of Understanding, signed between the Government of Canada and the Government of Saskatchewan in 1985, the Government of Saskatchewan is assisting the Federal Government in implementing NEA's.

The Government has contracted Venus Consulting to co-ordinate the necessary federal-provincial agreements to implement these National Emergency Agencies.

The Government of Saskatchewan is looking forward to completing two National Emergency Arrangements per year.

These National Emergency Arrangements include:

- National Emergency Arrangement for Transportation
- National Emergency Arrangement for Health & Welfare Canada
- National Emergency Arrangement for Food
- National Emergency Arrangement for Energy (Gas & Electricity)
- National Emergency Arrangement for Manpower
- National Emergency Arrangement for Communication
- National Emergency Arrangement for Construction

Administration and Communications Branch

R.P. Knoll
Director

Objectives

- To provide central administrative, financial, personnel, library, information, procurement, systems and office support services to all branches;
- To assist and advise Department management; and develop, evaluate and implement administrative policies;
- To represent the department and provide liaison with private and central government agencies for the acquisition of resources;
- To keep the public informed of environmental and public safety issues; and to enhance public awareness of department policies and programs.

Activities

- Executive administration to facilitate department management for the Minister and Deputy Minister.
- Management services to advise on administrative, financial, and personnel operations; preparation of budgets, legislation, Cabinet and Treasury Board submissions; and administrative policy development and implementation.
- Financial services for central accounting of expenditures and revenues, contract administration, and grant payment authorization; and the acquisition of CVA vehicles, supplies, equipment and services.
- Human resources services for management of central records, forms, filing, mail and library functions; provision of office space, furniture and parking; and staff recruitment, classification and development, including field office operations.
- System services for acquisition, management and operation of all department computer systems; provision of analyst support services; and co-ordination of central word processor services.
- Information services for the management of Department publicity campaigns; design and development of program brochures and publications; preparation of press releases and public meeting notices; co-ordination of annual reports; maintenance of Department audio/visual equipment; and operation of Department inquiry line.

Financial Services

This section was responsible for all accounting and purchasing operations for the Department. This included processing expenditures, purchase of materials and supplies, processing of travel and sustenance claims, budgeting, inventory control, collection of revenue, contract administration and maintenance of departmental accounting records and statements.

A total of 13,220 payments were processed over the year. A CVA vehicle fleet of 49 vehicles was maintained for use by employees on government business during the fiscal year.

The section is fully automated using personal computers and the government Revenue and Expenditure System. Central control of equipment inventory, CVA vehicles and telephone requirements have been aided by this automation.

Table 25
Department Expenditures and Revenues

Expenditures	$	% Total
Administration and Communications	1,049,583	8.2
Environmental Protection	3,724,239	29.1
Environmental Assessment	534,685	4.2
Emergency Measures Organization	351,856	2.7
Public Safety	4,768,694	37.3
Payments to The Saskatchewan Property Management Corporation	797,458	6.2
Grants for Environmental Purposes	36,997	.3
Grant to Toxicology Research Centre	200,000	1.6
Grant to Water Appeal Board	41,100	.3
Payments under Operation Recycle Program	1,265,497	9.9
Members of the Executive Council	29,794	.2
Total	**$ 12,799,903**	**100.0%**

Revenues	$	% Total
Boiler and Pressure Vessel Safety - Fees/Licences	1,088,805	22.1
Elevator and Electrical Safety - Fees/Licences	1,492,173	30.4
Gas Safety - Fees/Licences	1,491,425	30.2
Fire Commissioner Licences	2,722	0.1
Administration and Communications - Personal Mileage/Misc.	37,596	.8
Operation Recycle - Sale Scrap Vehicles	645,090	13.1
Emergency Measures Organization - Cost Share Claims/Canada	162,632	3.3
Total	**$ 4,920,443**	**100.0%**

Figure 2

Saskatchewan Environment and Public Safety
Percentage Allocation of Department Expenditures

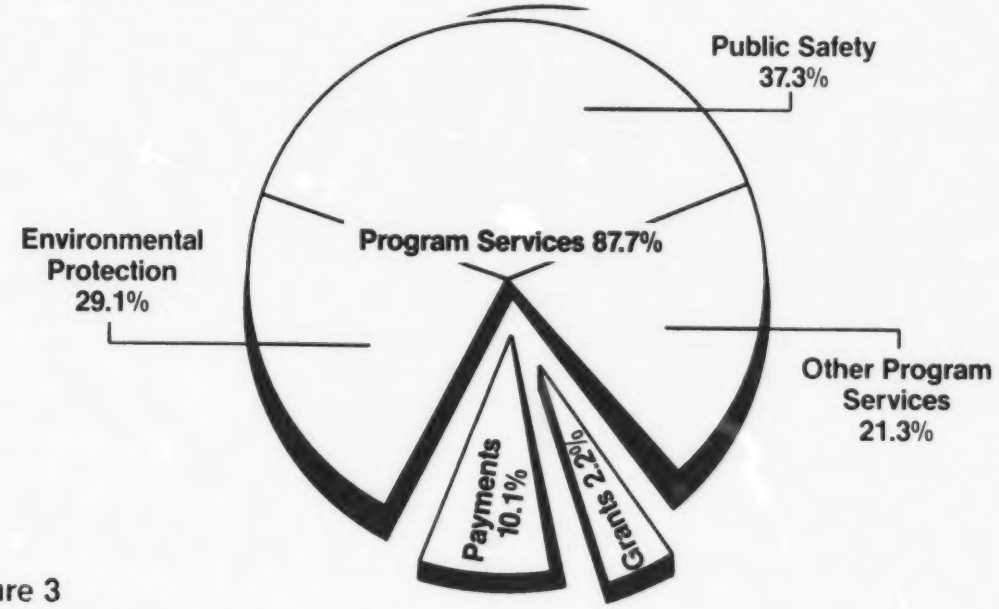
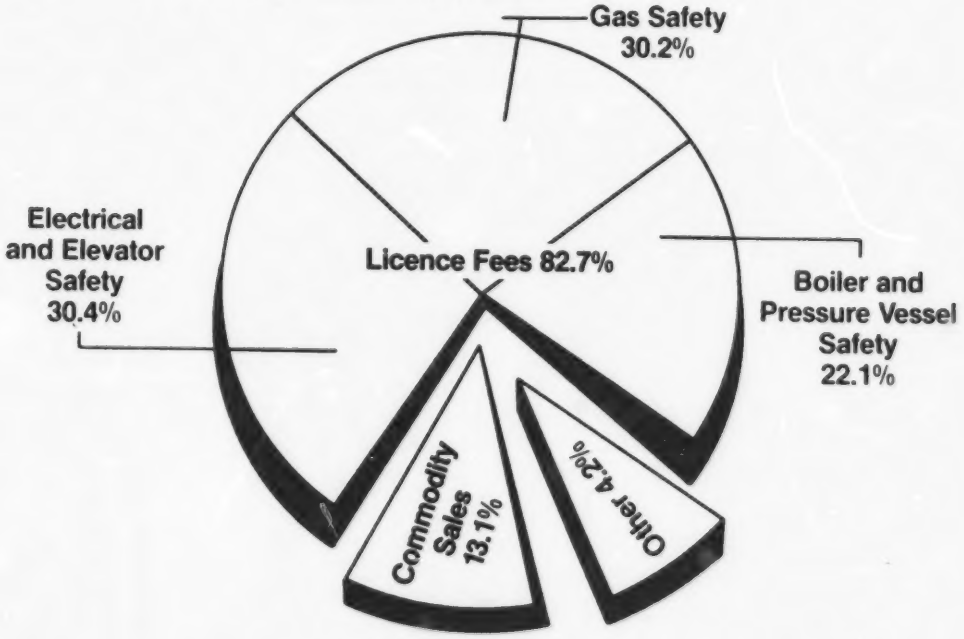


Figure 3

Saskatchewan Environment and Public Safety
Percentage Allocation of Department Expenditures



Human Resources

This section provided central personnel, accommodation, library, records and mail services to the Department. The government automated Human Resources System is utilized for most personnel transactions through the use of personal computers.

A total of 8 recruitment and 16 classification actions occurred during the fiscal year. In addition to this, a total of 21 non-permanent employees were recruited to meet program requirements.

The staff development function continued as an important factor in meeting the training needs of Department staff. A total of 63 employees participated in various training courses over the year representing approximately 235 person days of training for the Department.

The Early Retirement Program was also implemented during the year with a total of 18 employees accepting early retirement. Also, 2 employees elected retirement under the regular program.

Table 26
Department Position Allocation

Program	Person/Years	% Total
Administration and Communications	23	13
Environmental Assessment	7	4
Environmental Protection	56	33
Public Safety	81	48
Emergency Measures	3	2
Total	**170**	**100**

The library subscribed to periodicals and purchased books, reports, pamphlets and microfiche for staff. The library also obtained inter-library loans, and co-ordinated staff requests for computer searches.

The library houses 800 books, 5300 government documents, and annual reports for 108 agencies. It has subscriptions for 121 journals and newspapers. It is also a depository for copies of Environmental Impact Statements for public use during review periods.

Table 27
Department Library Services

Inter-library loans (from other libraries)	408
Inter-library loans (to other libraries)	30
Circulation to staff	940
Circulation to public	60
Reference questions	420
Book orders for the Department	310
New journal orders for the Department	16
Materials catalogued	344

Systems Services

This section co-ordinated all computer programs in the Department and participated in systems studies to improve effectiveness and efficiency of Department operations. Services included assisting branches in the acquisition of computer equipment, providing analyst support services and developing computer programs for use by the Department.

Recruitment of a manager was completed during the year. This section also participated in the University of Regina Co-op Work Study Program. During the fiscal year, the section assisted in acquiring 8 computers, 1 laser printer, 5 letter quality printers, 1 tape backup device, 1 compact disc storage and software for use in department program branches.

Significant resources were allocated to development of software, computer training and analysis for the Department Informatics Strategic Plan.

Table 28
Department Computer Systems

Branch/System(s)	Description
Administration and Communications	
Revenue and Expenditure (RES)*	Government accounting and cheque issuance system
Human Resources (HRS)*	Government personnel database and payroll system
Generalized Retrieval and Storage Package (GRASP)*	Database of department mailing list
Word Processing	Administrative support
Spreadsheet	Decision assist
Air and Land Protection	
Environmental Data Management (EDMS)	Air quality monitoring database
Spill Reporting	Spills of pollutants reported to department
Landfills and Liquid Waste Haulers	Database for regulation and permits
Word Processing	Administrative support
Modelling for Groundwater Resources	Decision assist
Mines Pollution Control	
Modelling Hydrogeological Contaminants	Decision assist
Word Processing	Administrative support
Spreadsheet for Radon Data	Decision assist
Water Quality	
ESQUADAT*	Database of chemical and bacteriological data on surface water, drinking water and waste water
BIODAT*	Database of biological data
WINDAT*	Database of municipal water and sewage works
Word Processing	Administrative support
Spreadsheet	Decision assist
Environmental Assessment	
Word Processing	Administrative support

Table 28 continued

Fire Commissioner	
Fire Statistics	Database for fire statistics
Word Processing	Administrative support
Sprinkler Modelling (SPRINKS)	Decision assist
Gas Safety	
Word Processing	Administrative support
Licensing Renewal	Issuing of contractor, employers and tradespersons licenses
Electrical and Elevator Safety	
Licensing Renewal	Issuing of contractor, employer and journeyman licenses
Boiler and Pressure Vessel	
Inspections and Invoicing*	Database of broilers and pressure vessel, inspection scheduling and invoicing for inspection activities
Licensing of Engineers and Firemen	Issuing of engineer and fireman certificates
Building Standards	
Word Processing	Administrative support
Emergency Measures Organization	
Word Processing	Administrative support

NOTE: All above systems are operated by standalone microcomputers; except for systems marked with an asterisk which utilize Westbridge mainframe support.

Information Services

The Information and Communications Branch was amalgamated with the Administration Branch at the end of 1986-87. This therefore was the first year of operation for the Information Services Section in respect to this new organization structure.

The section continued efforts to keep the public informed of all major events concerning the environment and public safety. This was done through the use of news releases, notices, advertisements and tender ads. Thirty-two news releases were prepared and distributed to the media during the fiscal year.

Household hazardous waste days (Regina)

Table 29
Department News Releases

Date of Release	Subject
May 11, 1987	Gas Safety in Secondary Dwellings A Concern
May 11, 1987	Safety Suggestions for Gas Barbecues
May 19, 1987	Environment Week
May 26, 1987	Presentation of Cheques (Emergency Measures Organization)
May 28, 1987	Swan Responds to Reports of Radon in Saskatchewan Homes
May 28, 1987	Gas Advisory Council to Meet in Regina
June 8, 1987	Operation Recycle Being Phased Out
June 26, 1987	Environmental Report Released (La Ronge Greenstone Belt Environmental Data Review)
July 13, 1987	Poplar River Mine Review Period Announced
August 11, 1987	Rafferty-Alameda Inquiry Board Named
August 18, 1987	Investigation of PCBs in Submersible Water Well Pumps
August 26, 1987	Rafferty-Alameda Review Period Extended
September 3, 1987	Rafferty-Alameda Board of Inquiry
October 1, 1987	Fire Prevention Week October 4 to 10
October 5, 1987	Poplar River Mine Relocation Gets Environmental Approval
October 6, 1987	Public Review Period Announced (Shand Thermal Generating Station)
October 14, 1987	Arsenic Clean-Up Completed
October 27, 1987	Public Review Period Announced (Rabbit Lake Uranium Development Expansion)
October 28, 1987	Chemical Safety Report Released
October 29, 1987	Litter Control Act Amendments Introduced
November 9, 1987	Provincial Fire Commissioner Appointed
November 27, 1987	Accessibility Regulations Passed
November 30, 1987	Uranium Mining Review Period Extended
November 30, 1987	Information Meeting in Mossbank (Soil Salinity at Old Wives Lake)
December 14, 1987	Input on Task Force Recommendations Sought
January 5, 1988	Collapsing Chimneys a Concern
January 6, 1988	Environmental Approval Granted for Uranium Mine Expansion (Rabbit Lake)
February 16, 1988	Shand Generating Station Receives Environmental Approval
February 24, 1988	Swan Releases Acid Rain Report

Staff also assisted in establishing information centres throughout the province to enable the public to view Environmental Impact Assessment documents on proposed new developments.

Existing information materials continued to be distributed on request. New brochures entitled "Radon in Saskatchewan Homes" and "Fire Safety in Mobile Homes" were developed and distributed. The preparation and distribution of the Department's annual report was also the responsibility of this section.

The Department distributed car litter bags through provincial parks as an Environment Week project to promote environmental awareness. Representation for the Department was also provided on the Provincial Environment Week Planning Committee.

Approximately 1,500 information inquiries were handled on the Department's inquiry line. Publications and brochures on Department programs, policies and legislation, as well as general information on the environment, are distributed on request. A publication list is available from the Department by writing to:

Saskatchewan Environment and Public Safety
Information Services Section
3085 Albert Street
Regina, Saskatchewan
S4S 0B1

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